



AlphaServer GS80/160/320

System Management Console Installation and User's Guide

Order Number: EK-GSCON-IN. D01

This manual provides installation and configuration instructions for the system management console, as well as information about using the system management console for managing consoles in *Compaq AlphaServer* GS80/160/320 systems. This manual is for service providers, managers, and operators of *Compaq AlphaServer* GS80/160/320 systems.

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Contents

Preface	xv
---------------	----

Part 1 Overview of the System Management Console

Chapter 1 Overview

1.1 System Management Console Overview	1-2
1.2 How to Use This Manual	1-4

Part 2 Installing the System Management Console

Chapter 2 Before You Begin

2.1 Installation Kit	2-2
2.2 Installation Sequence	2-4

Chapter 3 Connecting the SMC in a System with Multiple Serial Console Lines

3.1 Set Up the SMC	3-2
3.2 Cable the Terminal Server to the SMC	3-4
3.3 Cable the Terminal Server to the GS80/160/320	3-6
3.3.1 Make the Cable Connection	3-6
3.3.2 Record the Connections	3-8
3.3.3 Dress the Cables	3-9
3.4 Cable the SMC to the Corporate Network	3-10

Chapter 4 Connecting the SMC in a System with One Serial Console Line

4.1 Set Up the SMC	4-2
--------------------------	-----

4.2	Cable the SMC to the GS80/160/320.....	4-4
4.3	Cable the SMC to the Corporate Network.....	4-6
4.4	Check the COM1 Settings.....	4-8

Chapter 5 Configuring the SMC Software

5.1	Set the SMC System Time, Date, and Time Zone.....	5-2
5.2	Configure the Network Connections.....	5-4
5.2.1	Verify the Computer Name.....	5-4
5.2.2	Verify the Network Protocol	5-6
5.2.3	Configure Network Adapter 1.....	5-8
5.2.4	Configure Network Adapter 2.....	5-10
5.2.5	Bind the Protocol	5-12
5.2.6	Verify the Network Setup.....	5-13
5.3	Enter the Mail Server Name in the ConsoleWorks Script.....	5-14
5.4	Configure Outlook Express	5-16
5.5	Delete Unused Consoles in ConsoleWorks.....	5-18
5.6	Configure the Terminal Server: Access Server Loader.....	5-20
5.6.1	Open Access Server Loader.....	5-20
5.6.2	Create the Database	5-22
5.6.3	Verify the Connection	5-24
5.7	Configure the Terminal Server: Access Server Manager.....	5-26
5.7.1	Open Access Server Manager	5-26
5.7.2	Test the Connection	5-28
5.7.3	Configure Access Server Manager	5-30
5.8	Replace the ConsoleWorks Configuration File.....	5-32

Chapter 6 Configuring the SMC for Remote Use

6.1	Set Up the Modem.....	6-2
6.2	Configure the Remote Access Software.....	6-4
6.2.1	Carbon Copy Access Edition	6-4
6.2.2	WinVNC.....	6-6

Part 3 Using the System Management Console

Chapter 7 Getting Started with the System Management Console

7.1	Logging on to the SMC.....	7-2
7.2	Using the SMC Locally	7-4

7.3	Using the SMC Remotely.....	7-6
7.4	Keep in Mind.....	7-8

Chapter 8 ConsoleWorks

8.1	Starting ConsoleWorks	8-2
8.2	Overview of ConsoleWorks.....	8-4
8.3	ConsoleWorks Screen.....	8-6
8.4	Managing Consoles	8-8
8.4.1	Loading Certificate Authority.....	8-10
8.4.2	Deleting a Console	8-14
8.4.3	Adding a Console	8-16
8.4.4	Renaming a Console.....	8-20
8.5	Managing Events and Actions	8-22
8.5.1	Adding an Event	8-24
8.5.2	Importing and Using Compaq-Supplied Events.....	8-26
8.5.3	Enabling an Action	8-28
8.5.4	Adding a Scan	8-32
8.5.5	Acknowledging and Purging Events.....	8-34
8.5.6	Expunging Events.....	8-36
8.6	Managing Users	8-38
8.6.1	Adding a User	8-40
8.6.2	Communicating with Another User.....	8-42
8.6.3	Changing a User Password.....	8-44
8.6.4	Adding a Profile	8-46
8.6.5	Modifying a Profile.....	8-48
8.7	Managing ConsoleWorks Log Files.....	8-50
8.7.1	Viewing a Log File	8-52
8.7.2	Deleting Log Files.....	8-54
8.7.3	Mailing a Log File.....	8-56
8.8	Saving the Configuration.....	8-58
8.9	Using KEA! with ConsoleWorks	8-60

Chapter 9 Compaq AlphaServer Partition Manager

9.1	Starting CAPM.....	9-2
9.2	Overview of CAPM.....	9-4
9.3	Partition Maps	9-6
9.4	Working With Hard Partitions	9-8
9.4.1	Creating Hard Partitions.....	9-10
9.4.2	Adding a Hard Partition	9-14
9.4.3	Deleting a Hard Partition.....	9-16

9.4.4	Modifying a Partition Map.....	9-18
9.4.5	Saving, Validating, and Committing a Partition Map.....	9-20
9.4.6	Loading a Saved Partition Map	9-22
9.5	Working With Soft Partitions	9-24
9.5.1	Basic Soft Partitioning.....	9-26
9.5.2	Adding a Soft Partition	9-28
9.5.3	Modifying a Soft Partition	9-30
9.5.4	Deleting a Soft Partition.....	9-32
9.5.5	Advanced Soft Partitioning.....	9-34
9.6	Managing CAPM Files.....	9-36

Chapter 10 Graphical Configuration Utility

10.1	Setting Up the GCU.....	10-2
10.1.1	Establish Access Control.....	10-2
10.1.2	Create an Account for Each Galaxy Instance	10-4
10.1.3	Define the Applications.....	10-6
10.2	Using the GCU	10-8

Part 4 Troubleshooting

Chapter 11 Troubleshooting

11.1	Troubleshooting Chart.....	11-2
11.2	Changing Baud Rates: System with Multiple Console Lines	11-8
11.2.1	Set the Terminal Server Port Speed to Match the GS80/160/320 Partition Speed	11-8
11.2.2	Test for a Baud Rate Match and Set Both to 9600	11-12
11.3	Changing Baud Rates: System with Single Console Line.....	11-14
11.3.1	Set the SMC System Speed to Match the GS80/160/320 Speed ..	11-14
11.3.2	Test for a Baud Rate Match and Set Both to 9600	11-16
11.4	Changing the Internet Explorer Proxy Setting.....	11-18
11.5	Starting the ConsoleWorks Services.....	11-20
11.6	Configuring the SMC System to Restart After a Power Failure.....	11-22
11.7	Setting the Path Variable	11-24

Appendix A Using the SMC Software CD

Appendix B Installing a Terminal Server in a GS160/320 System

B.1	Remove the Existing Connection from the SMC System to the GS160/320	B-2
B.2	Attach the Mounting Brackets.....	B-4
B.3	Install the Terminal Server in the GS160/320 Power Cabinet	B-6
B.4	Connect the Terminal Server to the Power Source.....	B-8
B.5	Cable the Terminal Server to the SMC System.....	B-10
B.6	Cable the Terminal Server to the GS160/320	B-12
B.6.1	Make the Cable Connection	B-12
B.6.2	Record the Connections.....	B-14
B.6.3	Dress the Cable.....	B-15

Appendix C Installing a Terminal Server in a GS80 System

C.1	Remove the Existing Connection from the SMC System to the GS80 ..	C-2
C.2	Attach the Mounting Brackets.....	C-4
C.3	Install the Terminal Server in the GS80 Rack	C-6
C.4	Connect the Terminal Server to the Power Source.....	C-8
C.5	Cable the Terminal Server to the SMC System.....	C-10
C.6	Cable the Terminal Server to the GS80.....	C-12
C.6.1	Make the Cable Connection	C-12
C.6.2	Record the Connections.....	C-14

Appendix D Compaq-Supplied Configuration Files for ConsoleWorks

D.1	SCM.PORT.....	D-1
D.1.1	Loading	D-2
D.1.2	Contents.....	D-2
D.2	MAIL.BAT and MAIL.PL.....	D-2
D.2.1	Loading and Configuration.....	D-3
D.2.2	Contents.....	D-3
D.3	Verification and Testing.....	D-3
D.4	Contents of the SCM.PORT File	D-5
D.5	Contents of the MAIL.PL File.....	D-8

Appendix E SMC Hard Disk

Index

Examples

5-1	Modifying the ConsoleWorks Script (MAIL.PL)	5-14
9-1	Excerpt from a CAPM Log File	9-36

Figures

1-1	System Management Console	1-2
3-1	GS80/160/320 Keyswitch.....	3-2
3-2	Windows NT Security Window	3-2
3-3	Terminal Server Management Channel Connector	3-4
3-4	Network Adapter 2.....	3-5
3-5	Local Port Location	3-6
3-6	Terminal Server Ports.....	3-7
3-7	Terminal Server Cable	3-9
3-8	Network Adapter 1.....	3-10
4-1	GS80/160/320 Keyswitch.....	4-2
4-2	Windows NT Security Window	4-2
4-3	COM1 Port	4-4
4-4	Local Port Connection.....	4-5
4-5	Network Adapter 1.....	4-6
4-6	Ports Dialog Box.....	4-8
4-7	Settings for COM1 Dialog Box.....	4-9
5-1	Date & Time Tab.....	5-2
5-2	Time Zone Tab.....	5-3
5-3	Identification Changes Dialog Box.....	5-4
5-4	Network Dialog Box	5-6
5-5	Select Network Protocol Dialog Box.....	5-7
5-6	Microsoft TCP/IP Properties	5-8
5-7	Microsoft TCP/IP Properties Dialog Box.....	5-10
5-8	Bindings Tab in the Network Dialog Box	5-12
5-9	Verifying the Network Setup	5-13
5-10	Internet Accounts Dialog Box	5-16
5-11	<i>account_name</i> Properties Dialog Box.....	5-17

5-12	ConsoleWorks Delete Console Screen	5-18
5-13	Delete Console Verification Message	5-19
5-14	Access Server Loader Window	5-20
5-15	Access Server Loader Confirm Dialog Box.....	5-21
5-16	Access Server Loader Configuration Dialog Box.....	5-22
5-17	Location of Hardware Address Label.....	5-23
5-18	Access Server Loader Window	5-24
5-19	Verifying the Connection	5-24
5-20	New Access Server Window	5-26
5-21	Access Server Dialog Box.....	5-27
5-22	Access Server Dialog Box, Utilities Tab.....	5-28
5-23	Telnet Window	5-29
5-24	Select a Command File Dialog Box	5-30
5-25	Run Command File Dialog Box.....	5-31
5-26	Configuration Files Folder.....	5-32
6-1	COM2 Port	6-2
6-2	Modem Detected.....	6-3
6-3	Communication Properties Dialog Box	6-4
6-4	Carbon Copy Access Edition Window	6-5
6-5	Default Local System Properties Dialog Box	6-6
7-1	Windows NT Security Window	7-2
7-2	Change Password Dialog Box	7-3
7-3	SMC Desktop.....	7-4
7-4	SMC Web Page.....	7-6
8-1	SMC Web Page.....	8-2
8-2	ConsoleWorks Application and Script.....	8-4
8-3	Mail Message from ConsoleWorks	8-5
8-4	ConsoleWorks Screen.....	8-6
8-5	Show Consoles Screen.....	8-8
8-6	Security Warning	8-10
8-7	File Download Dialog Box.....	8-11
8-8	TDI Certificate	8-12
8-9	Root Certificate Store Window.....	8-13
8-10	Delete Console Screen.....	8-14
8-11	Delete Console Verification Message	8-15
8-12	Add Telnet Console Screen	8-16
8-13	<i>console_name</i> Configuration Screen.....	8-18
8-14	<i>console_name</i> Configuration Screen.....	8-20
8-15	Show Events Screen.....	8-22
8-16	Add Event Screen.....	8-24
8-17	Event <i>event_name</i> Screen.....	8-28

8-18	Event event_name Actions Screen.....	8-29
8-19	Mail from ConsoleWorks.....	8-30
8-20	Add Scan Screen.....	8-32
8-21	Scan <i>scan_name</i> Screen	8-33
8-22	ConsoleWorks Events Detail Screen.....	8-34
8-23	Acknowledged Event.....	8-35
8-24	Expunge Events Screen	8-36
8-25	Expunge Completed Message.....	8-37
8-26	Show Users Screen.....	8-38
8-27	Add User Screen.....	8-40
8-28	<i>user_name</i> Screen.....	8-41
8-29	Send a User Message Screen	8-42
8-30	User <i>user_name</i> Messages Screen.....	8-43
8-31	Change Password Screen.....	8-44
8-32	Password Change Screen.....	8-45
8-33	Add Profile Screen.....	8-46
8-34	<i>profile_name</i> Screen.....	8-47
8-35	Show Profiles Screen.....	8-48
8-36	<i>profile_name</i> Screen.....	8-49
8-37	<i>console_name</i> Logfiles Screen	8-50
8-38	Log File Screen.....	8-52
8-39	<i>console_name</i> Logfiles Screen	8-54
8-40	Outlook Express Message Window	8-56
8-41	Windows NT Explorer.....	8-58
8-42	Console Connections Settings Screen	8-60
8-43	Telnet Proxy Status Window	8-61
8-44	KEA! Connection Window.....	8-62
9-1	SMC Web Page.....	9-2
9-2	Login Box	9-4
9-3	Sample Partition Map.....	9-6
9-4	Current Partition Map Screen	9-8
9-5	Work with Partition Maps Screen.....	9-10
9-6	Create/Modify a Partition Map	9-12
9-7	Add/Modify Hard Partition Screen	9-14
9-8	Add/Modify Hard Partition Screen	9-15
9-9	Create/Modify a Partition Map Screen	9-16
9-10	Delete Confirmation Message.....	9-17
9-11	Current Partition Map Showing Unassigned Partition.....	9-17
9-12	Work with Partition Maps Screen.....	9-18
9-13	Add/Modify Hard Partition Screen	9-19
9-14	Saving a Partition Map.....	9-20

9-15	Validating a Partition Map	9-20
9-16	Committing a Partition Map	9-21
9-17	Work with Partition Maps Screen	9-22
9-18	Add/Modify Hard Partition Screen Showing Soft Partitioning Options	9-24
9-19	Basic Soft Partitioning Message	9-26
9-20	Basic Soft Partition Screen	9-26
9-21	Add/Modify Soft Partition Screen	9-28
9-22	Basic Soft Partition Screen; Modifying a Partition	9-30
9-23	Add/Modify Soft Partition Screen	9-31
9-24	Basic Soft Partition Screen; Deleting a Partition	9-32
9-25	Delete Confirmation	9-32
9-26	Basic Soft Partition Screen; Partition Deleted	9-33
9-27	Advanced Soft Partition Screen	9-34
10-1	eXcursion Control Panel Access Tab	10-2
10-2	Accounts Tab	10-4
10-3	Applications Tab	10-6
10-4	eXcursion Icon	10-8
11-1	Browser Window	11-8
11-2	Ports Configuration Dialog Box	11-9
11-3	Configuration Dialog Box	11-10
11-4	Connection Service Configuration Dialog Box	11-11
11-5	Show Consoles Screen	11-12
11-6	Ports Dialog Box	11-14
11-7	Settings for COM1 Dialog Box	11-15
11-8	Show Consoles Screen	11-16
11-9	LAN Settings Dialog Box – Automatic Configuration	11-18
11-10	LAN Settings Dialog Box – Proxy Server	11-19
11-11	ConsoleWorks Services	11-20
11-12	Service Dialog Box	11-21
11-13	Switch Setting for Models DPENM and DPEND	11-22
11-14	System Properties Dialog Box	11-24
B-1	COM1 Port	B-2
B-2	PCI Box Rear – Local Port Connection	B-3
B-3	Mounting Brackets	B-4
B-4	Position Identifier Dial	B-6
B-5	Terminal Server Placement in the GS160/320 System	B-7
B-6	GS160/320 AC Input Box	B-8
B-7	Terminal Server Management Channel Connector	B-10
B-8	Network Adapter 2	B-11
B-9	PCI Box Rear — Local Port Location	B-12
B-10	Terminal Server Ports	B-13

B-11	Terminal Server Cable	B-15
C-1	COM1 Port	C-2
C-2	PCI Box Rear – Local Port Connection	C-3
C-3	Mounting Brackets.....	C-4
C-4	Position Identifier Dial.....	C-6
C-5	Terminal Server Placement in the GS80 System	C-7
C-6	GS80 AC Input Box.....	C-8
C-7	Terminal Server Management Channel Connector	C-10
C-8	Network Adapter 2.....	C-11
C-9	PCI Box Rear — Local Port Location	C-12
C-10	Terminal Server Ports.....	C-13
E-1	C Partition.....	E-2

Tables

1	AlphaServer GS80/160/320 Documentation.....	xvi
2-1	SMC PC Kit.....	2-2
2-2	3X-DS8AA-AA Terminal Server Kit	2-3
3-1	Terminal Server Cabling.....	3-7
3-2	Terminal Server Cabling at This Installation	3-8
7-1	SMC Desktop Icons	7-5
8-1	Compaq-Supplied Events.....	8-26
11-1	Troubleshooting Chart	11-2
B-1	Terminal Server Cabling.....	B-13
B-2	Terminal Server Cabling at This Installation	B-14
C-1	Terminal Server Cabling.....	C-13
C-2	Terminal Server Cabling at This Installation	C-14
D-1	Events Created by SCM.PORT	D-1
E-1	Use of Disk Partitions	E-1

Preface

Intended Audience

This manual is for service providers, managers, and operators of *Compaq AlphaServer GS80/160/320* systems.

Document Structure

This manual uses a structured documentation design. Topics are organized into small sections, usually consisting of two facing pages. Most topics begin with an abstract that provides an overview of the section, followed by an illustration or example. The facing page contains descriptions, procedures, and syntax definitions.

This manual has 11 chapters and five appendixes:

- **Chapter 1, Overview**, is an introduction to the system management console.
- **Chapter 2, Before You Begin**, contains information about the installation kit.
- **Chapter 3, Connecting the SMC in a System with Multiple Serial Console Lines**, is the procedure for connecting the SMC hardware in a system with more than one console line.
- **Chapter 4, Connecting the SMC in a System with One Serial Console Line**, describes the connection of an SMC that does not include a terminal server.
- **Chapter 5, Configuring the SMC Software**, gives instructions for configuration of the SMC software.
- **Chapter 6, Configuring the SMC for Remote Use**, is setup instructions for the modem and Carbon Copy 32.
- **Chapter 7, Getting Started with the System Management Console**, is an overview of the functions that are performed with the system management console.

- **Chapter 8, ConsoleWorks**, contains information about using the application to manage the GS80/160/320 consoles.
- **Chapter 9, Compaq AlphaServer Partition Manager**, contains directions for using this application to partition the GS80/160/320 system.
- **Chapter 10, Graphical Configuration Utility**, has information about setting up and using the utility.
- **Chapter 11, Troubleshooting**, contains suggestions for basic troubleshooting.
- **Appendix A, Using the SMC Software CD**, provides the location of instructions for using this CD.
- **Appendix B, Installing a Terminal Server in a GS160/320 System**, is the procedure for upgrading a GS160/320 system from a single console line to multiple console lines.
- **Appendix C, Installing a Terminal Server in a GS80 System**, is the procedure for upgrading a GS80 system from a single console line to multiple console lines.
- **Appendix D, Compaq-Supplied Configuration Files for ConsoleWorks**, contains in-depth information about the ConsoleWorks configuration files.
- **Appendix E, SMC Hard Disk**, lists recommendations for use of the disk partitions and shows the directory structure.

Documentation Titles

Table 1 AlphaServer GS80/160/320 Documentation

Order Number	Title
QA-6GAAA-G8	AlphaServer GS80/160/320 Documentation Kit
EK-GS320-UG	<i>AlphaServer GS80/160/320 User's Guide</i>
EK-GS320-RM	<i>AlphaServer GS80/160/320 Firmware Reference Manual</i>
EK-GSPAR-RM	<i>AlphaServer GS80/160/320 Getting Started with Partitions</i>
EK-GS320-IN	<i>AlphaServer GS160/320 Installation Guide</i>
EK-GSR80-IN	<i>AlphaServer GS80 Installation Guide</i>
AG-RKSWB-BE	AlphaServer GS80/160/320 User Information CD (HTML files)

Table 1 AlphaServer GS80/160/320 Documentation (Continued)

Order Number	Title
AG-RLVJA-BE	AlphaServer GS80/160/320 User Information CD (translations)
QA-6GAAB-G8	AlphaServer GS80/160/320 Service Documentation Kit
EK-GS320-SV	<i>AlphaServer GS80/160/320 Service Manual</i>
EK-GS320-RM	<i>AlphaServer GS80/160/320 Firmware Reference Manual</i>
AG-RKSZ*-BE	AlphaServer GS80/160/320 Service Information CD
EK-GSCON-IN	<i>AlphaServer GS80/160/320 System Management Console Installation and User's Guide</i>
EK-GS320-UP	<i>AlphaServer GS160/320 Upgrade Manual</i>
EK-GSR80-UP	<i>AlphaServer GS80 Upgrade Manual</i>
EK-GS320-SP	<i>AlphaServer GS80/160/320 Site Preparation</i>

Information on the Internet

Visit Compaq's *AlphaServer* site at www.compaq.com/alphaserver/site_index.html for more information about *AlphaServer* GS80/160/320 systems.

Part 1

Overview of the System Management Console

Chapter 1

Overview

The system management console is the console device for *AlphaServer* GS80/160/320 systems. It consists of a *Compaq Deskpro* PC, a DECserver 90M terminal server, and associated hardware and software.

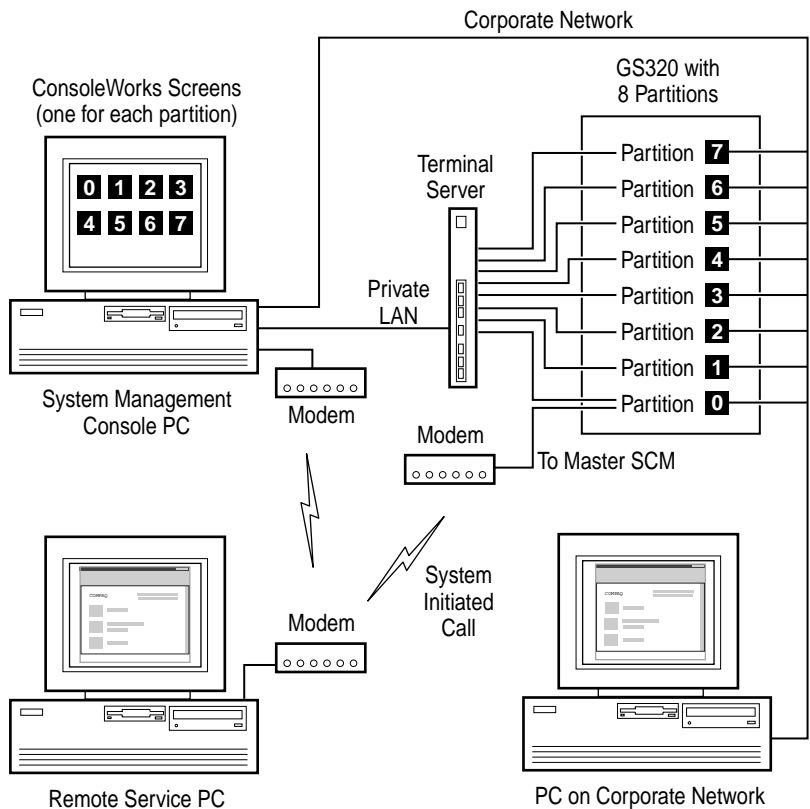
Sections in this chapter include:

- System Management Console Overview
- How to Use This Manual

1.1 System Management Console Overview

The system management console makes it possible to operate a system that has multiple partitions with a single console device.

Figure 1-1 System Management Console



PK-2702-00

With the system management console (SMC), an *AlphaServer* GS80/160/320 system with multiple console lines can be managed from a single device. The system management console consists of a DECserver 90M terminal server, a *Compaq Deskpro* PC, and associated hardware and software. Figure 1-1 shows a typical system.

The eight-port terminal server can connect to a maximum of eight partitions. The console for each partition can be displayed in a terminal window under ConsoleWorks.

The PC contains two network interfaces. The first connects to the terminal server via a private LAN. The second connects to the corporate network, enabling remote operation of the system management console through a Web browser.

The PC also has an attached modem, which can provide Compaq Services remote access to the GS80/160/320 system.

ConsoleWorks¹ provides a sophisticated console management environment for accessing the console of each partition, logging console line activity, and sending notification of console or system events. In addition to local access through the SMC, console lines can be accessed from any networked workstation by using a Web browser.

NOTE: *The PC that is supplied as part of the system management console is supported by Compaq only with the hardware and software configuration provided. To maintain this support, you may not add or replace any components except as provided by Compaq.*

¹ The version of ConsoleWorks used on the SMC has been modified by the manufacturer, TECSys Development Incorporated (TDI), to comply with the *AlphaServer* Management Architecture. TDI's standard version of ConsoleWorks cannot be used as a replacement for this SMC application.

1.2 How to Use This Manual

The chapters and appendixes in this manual provide instructions for installing and using the system management console and for restoring the SMC disk.

Installing the system management console – In Part 2 of this manual, Chapters 3 through 6 provide procedures for cabling and configuring the system management console.

- **System with multiple consoles** – If the system is partitioned, follow the procedures in Chapters 3, 5 (except Section 5.7), and 6.
- **System with one console** – Follow the procedures in Chapters 4, 5 (Sections 5.1 through 5.4 and 5.7 only), and 6.

Using the system management console – In Part 3, Chapters 7 through 10 provide information on using the system management console.

Troubleshooting - In Part 4, Chapter 11 provides basic troubleshooting information.

In addition, five appendixes contain additional information about the system management console.

Part 2

Installing the System Management Console

Chapter 2

Before You Begin

This chapter contains information you need before starting the installation.

Sections in this chapter are:

- Installation Kit
- Installation Sequence

2.1 Installation Kit

The system management console consists of the SMC PC kit and the terminal server kit. Typically the terminal server kit is installed at the factory.

Table 2-1 SMC PC Kit

Part Number	Description
3X-DS8BA-xx	BOM for SMC PC kit; contains these items:
See note	<i>Compaq Deskpro</i> PC (minitower or desktop box) including keyboard, mouse, and Windows NT 4.0 CD
3R-A1605-xx	Power cord and adapter for modem
3R-A1611-AA	Worldwide V.90/56K external serial modem (includes PC-to-modem cable)
QB-6K4AA-SA	GS80/160/320 SMC software and documentation: AG-RMDRB-BE, console management software CD AV-RMDQB-TE, <i>SMC Installation and Release Notes</i> QM-6K4AA-AA, license EK-GSCON-IN, <i>SMC Installation and User's Guide</i> (this manual)

NOTE: *The PC provided in this kit is the only one that works in this configuration. See the 3X-DS8BA-xx BOM for the PC part number.*

The order number for the SMC PC kit is 3X-DS8BA-xx. It contains the components listed in Table 2-1. (The monitor is separately ordered; it is not part of the SMC PC kit.) The components of the SMC PC kit are installed at the site.

When the SMC is ordered with the GS80/160/320 system, the terminal server and cables are installed in the GS160/320 power cabinet or the GS80 cabinet at the factory. When the SMC is not ordered with the GS80/160/320 system, the terminal server kit is installed at the site. (Installation instructions are in Appendix B for GS160/320 systems and Appendix C for GS80 systems.) The order number for the terminal server kit is 3X-DS8AA-AA. Components of the kit are listed in Table 2-2.

Table 2-2 3X-DS8AA-AA Terminal Server Kit

Quantity	Item	Description
1	DECserver 90M	Terminal server
4	BN25G-04	4-meter cable
4	BN25G-07	7-meter cable
1	BN24Q-07	7-meter crossover cable
8	H8585-AA	Connector
	Mounting hardware	

2.2 Installation Sequence

Before installing the terminal server, check that the keyswitch and all AC input box breakers on the GS80/160/320 system are turned to Off.

The following is the recommended sequence of installation for the GS80/160/320 system and the system management console:

1. Set up the GS80/160/320 hardware. See the *AlphaServer GS80 Installation Guide* or the *AlphaServer GS160/320 Installation Guide*.
2. Set up the SMC PC and, with the GS80/160/320 keyswitch turned to Off, turn on the breakers on the GS80/160/320 system cabinets and I/O cabinets (Section 3.1 or Section 4.1).
3. Make the SMC cable connections (Sections 3.2 through 3.4 or Sections 4.2 and 4.3).
4. Configure the SMC software and verify communication from the system management console to the system control manager (Chapter 5).
5. Optionally, configure the SMC for remote use (Chapter 6)
6. Power up the GS80/160/320 system (Chapter 6).

Chapter 3

Connecting the SMC in a System with Multiple Serial Console Lines

A system with multiple console lines is a GS80/160/320 system that has more than one standard I/O (SIO) module. The SIO module is in a PCI box connected to a quad building block, and on it is the SRM console firmware, which provides a command-line interface for operator control of the system or a partition.

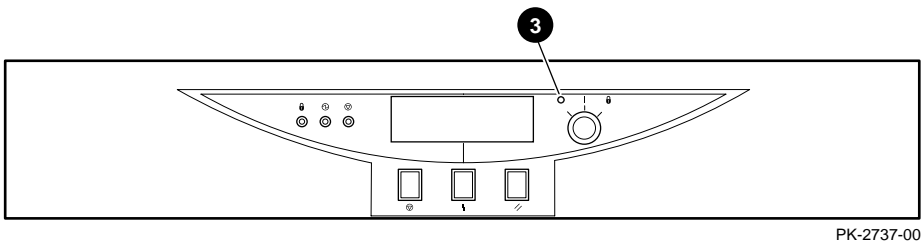
Sections in this chapter are:

- Set Up the SMC
- Cable the Terminal Server to the SMC
- Cable the Terminal Server to the GS80/160/320
 - Make the Cable Connection
 - Record the Connections
 - Dress the Cables
- Cable the SMC to the Corporate Network

3.1 Set Up the SMC

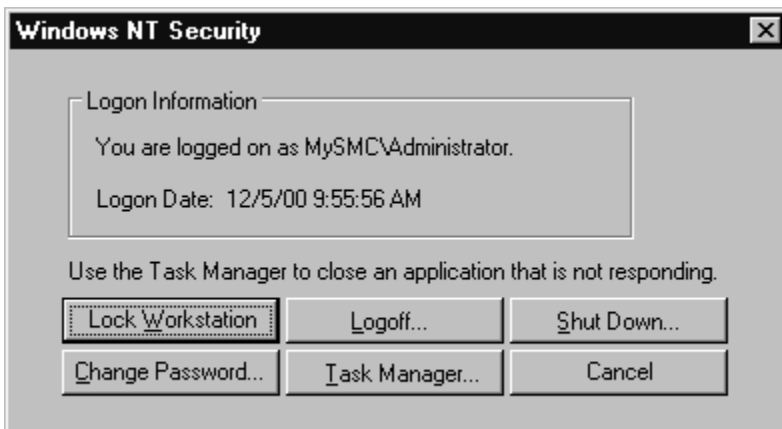
Follow the instructions enclosed with the SMC system and monitor to set them up, then start the system. With the GS80/160/320 keyswitch turned off, turn on the AC input box breakers. Make cable connections. Log on to the SMC system.

Figure 3-1 GS80/160/320 Keyswitch



PK-2737-00

Figure 3-2 Windows NT Security Window



PK-2739-00

1. Set up the *Compaq Deskpro* computer and monitor according to the accompanying instructions.
2. Start the SMC system. As the system software loads, enter information when requested: user name, company name, product ID, and system name. See the *AlphaServer GS80/160/320 System Management Console Installation and Release Notes* for instructions.
3. Check that the keyswitch on the GS80/160/320 system is turned to Off (❶ in Figure 3–1 points to the Off position) and then turn on the circuit breakers on the AC input boxes. The breakers are accessible from the rear of both the GS80 cabinet and the GS160/320 power cabinet. Then make the cable connections described in Sections 3.2 through 3.4.
4. When the operating system software has finished loading, log on to the SMC system using the administrator account. (The username is *administrator*; for the password, press the Enter key.)
5. Optionally, change the password for the administrator account.
 - a. Press Ctrl+Alt+Del. The Windows NT Security window displays (Figure 3–2).
 - b. Click the Change Password... button. The Change Password dialog box displays.
 - c. Enter the old password and the new one, and confirm the new password. Click OK.
6. Check the version of the SMC software by double-clicking the Version icon:

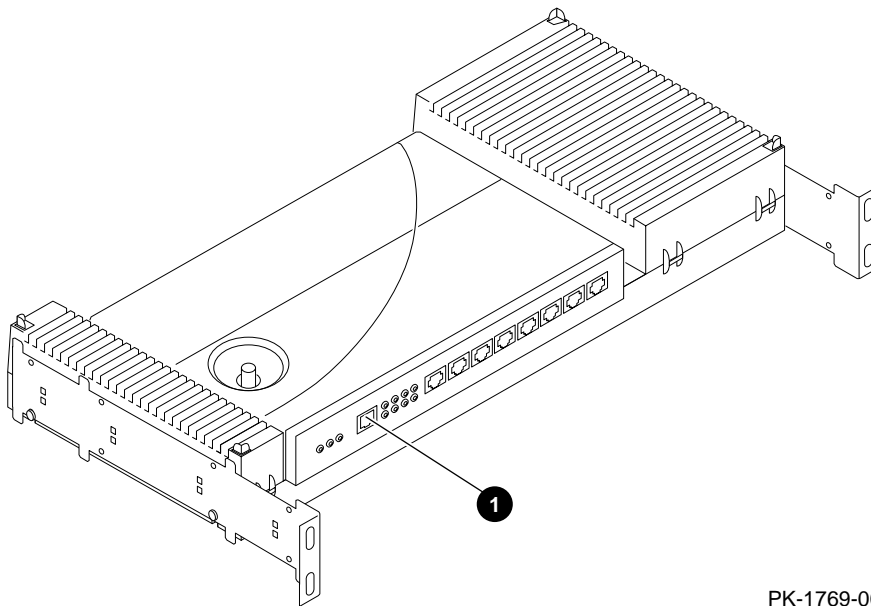


If the version is not 3.1, or if the desktop does not have a Version icon, update the software. Refer to the *AlphaServer GS80/160/320 System Management Console Installation and Release Notes* for instructions.

3.2 Cable the Terminal Server to the SMC

Connect the management channel connector on the terminal server to network adapter 2 on the SMC system.

Figure 3-3 Terminal Server Management Channel Connector

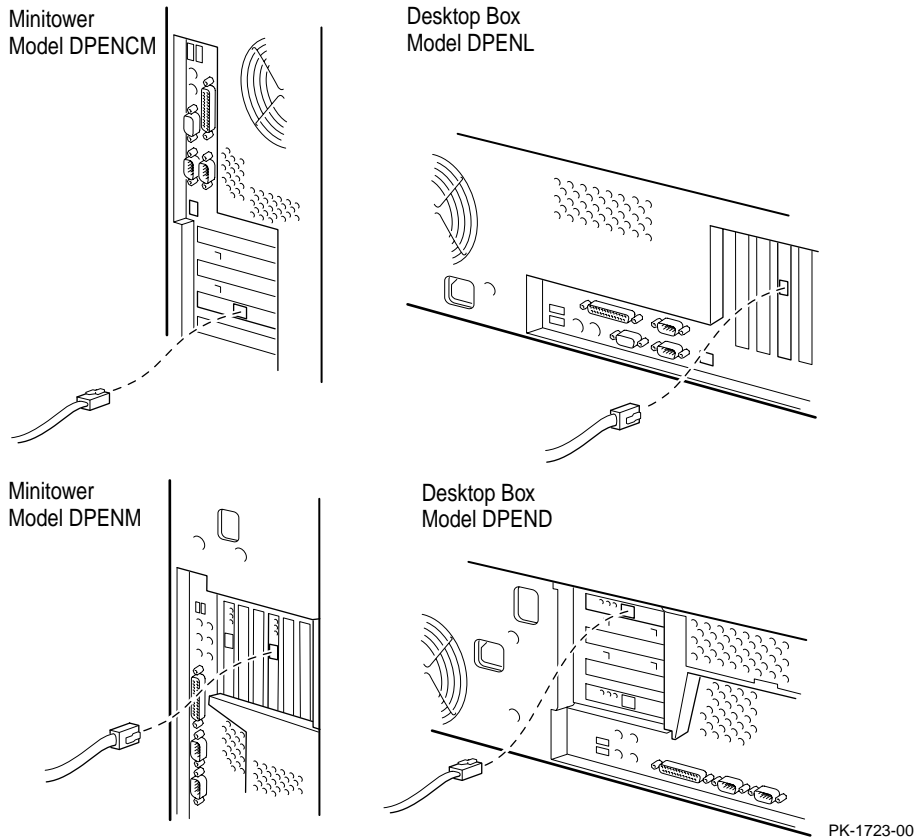


PK-1769-00

1. Connect one end of the BN24Q-07 cable (17-04308-05) to the management channel connector on the terminal server (❶ in Figure 3-3).
2. Connect the other end of the cable to network adapter 2 on the SMC system (Figure 3-4). The network adapters are numbered from left to right on the minitower; bottom to top on the desktop.

NOTE: *BN24Q is a crossover cable that can be used only for a point-to-point Ethernet connection. It cannot connect an Ethernet node to a hub. If such a connection is required, use a BN25G cable (17-03212-xx).*

Figure 3-4 Network Adapter 2



NOTE: *The model type is on a label on the top or side of the SMC box.*

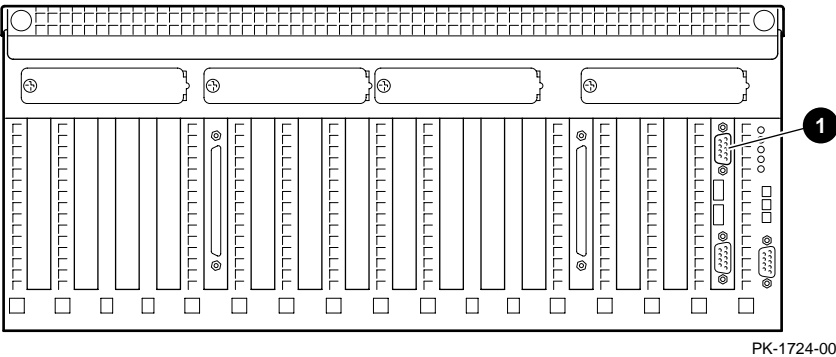
3.3 Cable the Terminal Server to the GS80/160/320

For PCI boxes in an expander cabinet, make the cable connection to the terminal server. Then record the connections in the table provided and dress the cables.

3.3.1 Make the Cable Connection

Cable the local port of the PCI box to the appropriate port on the terminal server with a BN25G cable.

Figure 3-5 Local Port Location



The cable connections are made at the factory from the standard I/O modules in PCI boxes in the GS160/320 power cabinet and in the GS80 cabinet. For PCI boxes in expander cabinets, an H8585-AA connector (12-36054-01) is installed on the local port (❶ in Figure 3-5) and a BN25G cable (17-03212-05) is labeled and attached at the factory.

Make the connection to each console (PCI box with a standard I/O module) in an expander cabinet. Follow the cabling chart in Table 3-1, and attach the BN25G cable to the port on the terminal server (❶ in Figure 3-6).

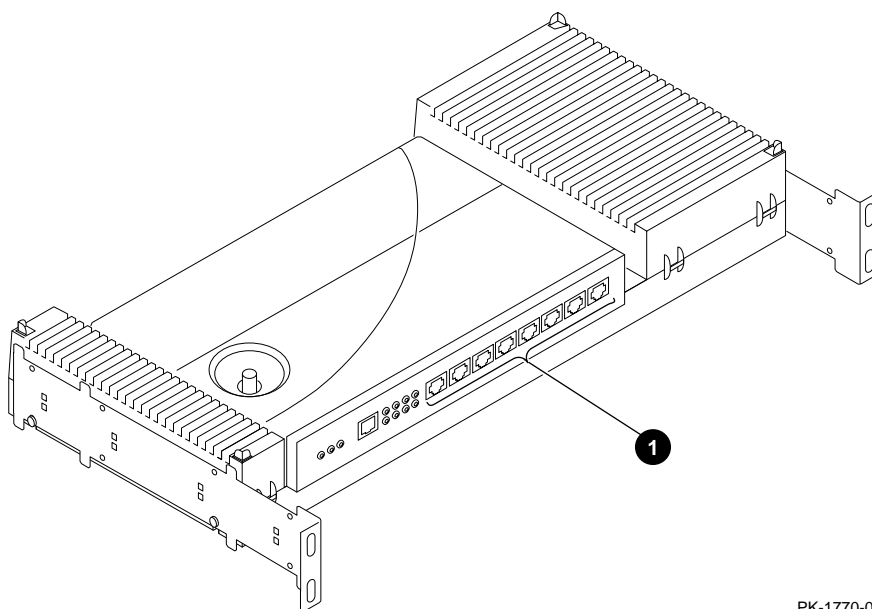
Table 3-1 shows the suggested cabling for master PCI boxes only. This numbering matches the default SMC setup. Secondary boxes (if there are any) can be cabled to unused terminal server ports.

For information about partitioning the system, see *AlphaServer GS80/160/320 Getting Started with Partitions*.

Table 3-1 Terminal Server Cabling

Terminal Server Port	QBB Number		
	GS80	GS160	GS320
1	0	0	0
2	1	1	1
3	—	2	2
4	—	3	3
5	—	—	4
6	—	—	5
7	—	—	6
8	—	—	7

Figure 3-6 Terminal Server Ports



PK-1770-00

3.3.2 Record the Connections

Record the connections made for this installation in Table 3-2.

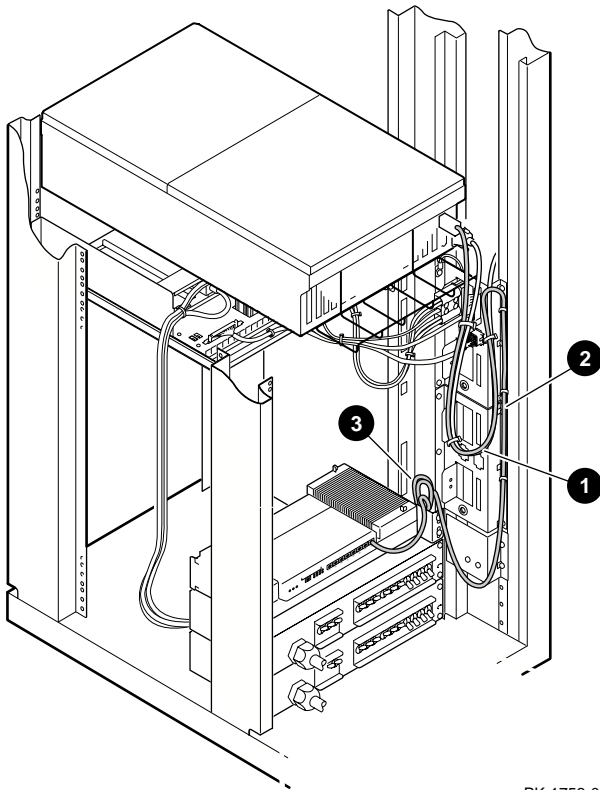
Table 3-2 Terminal Server Cabling at This Installation

Terminal Server Port	PCI Box Number	QBB Number
1		
2		
3		
4		
5		
6		
7		
8		

3.3.3 Dress the Cables

Form a service loop and tie wrap the BN25G cable to the rail.

Figure 3-7 Terminal Server Cable



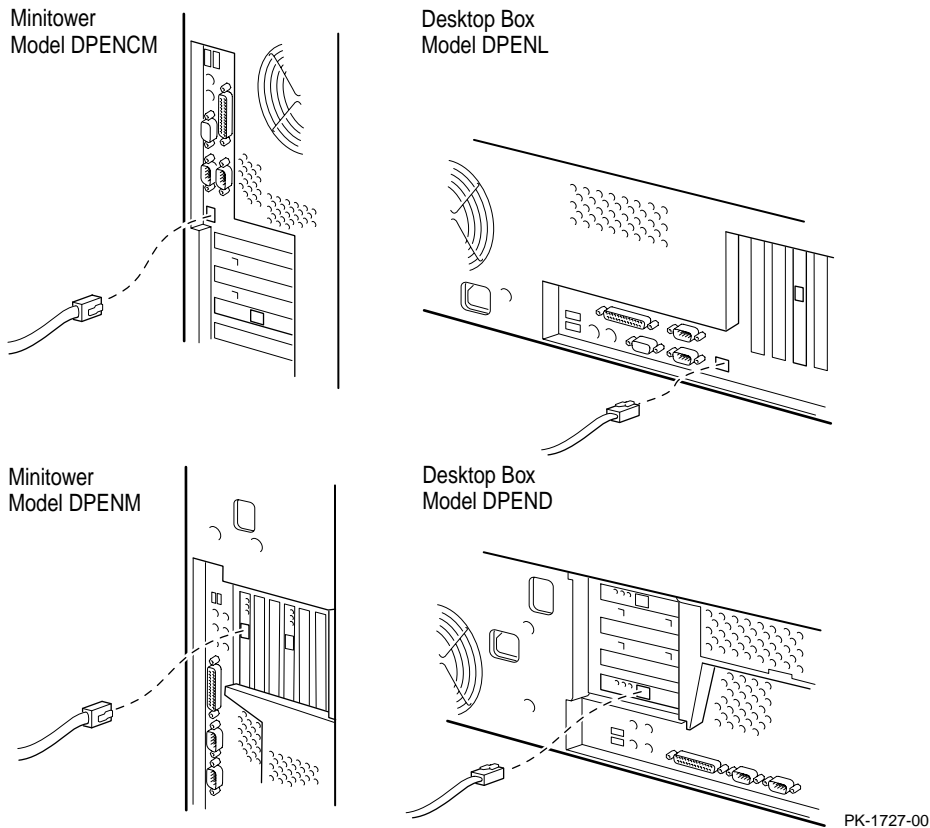
PK-1753-00

1. At the PCI box end, tie wrap the BN25G cable (17-03212-05) to the CSB junction cable (17-04936-xx) to form a service loop (❶ in Figure 3-7).
2. Tie wrap the BN25G cable down the rail of the expander cabinet (❷).
3. At the bottom of the rail, coil the BN25G cable and place the extra length in the rail (❸).

3.4 Cable the SMC to the Corporate Network

Connect to the corporate network from network adapter 1 on the SMC system.

Figure 3-8 Network Adapter 1



NOTE: *The model type is on a label on the top or side of the SMC box.*

Connect a network cable to network adapter 1 on the SMC system, as shown in Figure 3–8. (This cable is not included in the SMC installation kit.) The network adapters are numbered from left to right on the minitower and from bottom to top on the desktop.

Chapter 4

Connecting the SMC in a System with One Serial Console Line

A system with a single console line is a GS80/160/320 system that has only one standard I/O (SIO) module. The SIO module is in a PCI box connected to a quad building block, and on it is the SRM console firmware, which provides a command-line interface for operator control of the system.

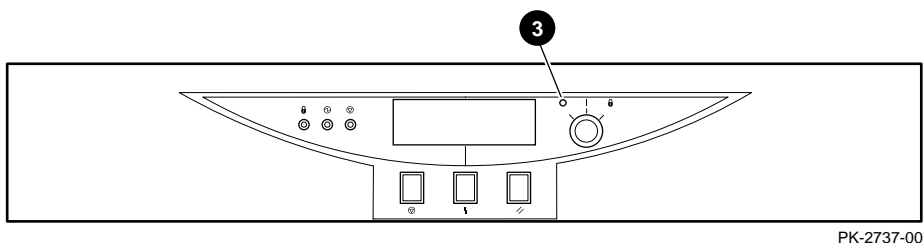
Sections in this chapter include:

- Set Up the SMC
- Cable the SMC to the GS80/160/320
- Cable the SMC to the Corporate Network
- Check the COM1

4.1 Set Up the SMC

Follow the instructions enclosed with the SMC system and monitor to set them up, then start the system. With the GS80/160/320 keyswitch turned off, turn on the AC input box breakers. Make cable connections. Log on to the SMC system.

Figure 4-1 GS80/160/320 Keyswitch



PK-2737-00

Figure 4-2 Windows NT Security Window



PK-2739-00

1. Set up the *Compaq Deskpro* computer and monitor according to the accompanying instructions.
2. Start the SMC system. As the system software loads, enter information when requested: user name, company name, product ID, and system name. See the *AlphaServer GS80/160/320 System Management Console Installation and Release Notes* for instructions.
3. Check that the keyswitch on the GS80/160/320 system is turned to Off (❶ in Figure 4–1 points to the Off position) and then turn on the breakers on the AC input boxes. The breakers are accessible from the rear of both the GS80 cabinet and the GS160/320 power cabinet. Then make the cable connection described in Section 4.2.
4. When the operating system software has finished loading, log on to the SMC system using the administrator account. (For the password, press the Enter key.)
5. Optionally, change the password for the administrator account.
 - a. Press Ctrl+Alt+Del. The Windows NT Security window displays (Figure 4–2).
 - b. Click the Change Password... button. The Change Password dialog box displays.
 - c. Enter the old password and the new one, and confirm the new password. Click OK.
6. Check the version of the SMC software by double-clicking the Version icon:

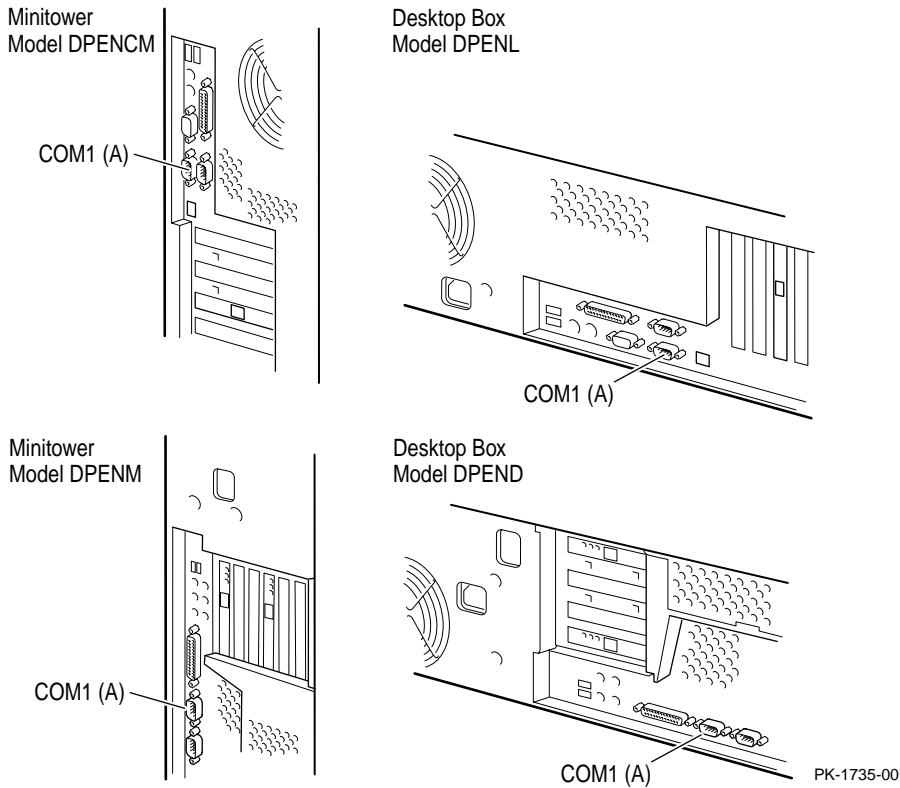


If the version is not 3.1, or if the desktop does not have a Version icon, update the software. Refer to the *AlphaServer GS80/160/320 System Management Console Installation and Release Notes* for instructions.

4.2 Cable the SMC to the GS80/160/320

Connect the COM1 port of the SMC system to the local port of the GS80/160/320.

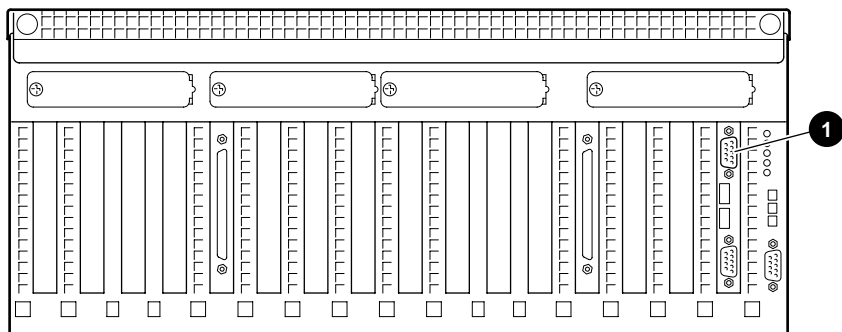
Figure 4-3 COM1 Port



NOTE: *The model type is on a label on the top or side of the SMC box.*

Install H8585-AA connectors (12-36054-01) on the COM1 (or A) port of the SMC system (Figure 4-3) and the local port of the standard I/O module in the GS80/160/320 system primary PCI box (❶ in Figure 4-4). Connect these ports with a BN24Q cable (17-04308-05).

Figure 4-4 Local Port Connection

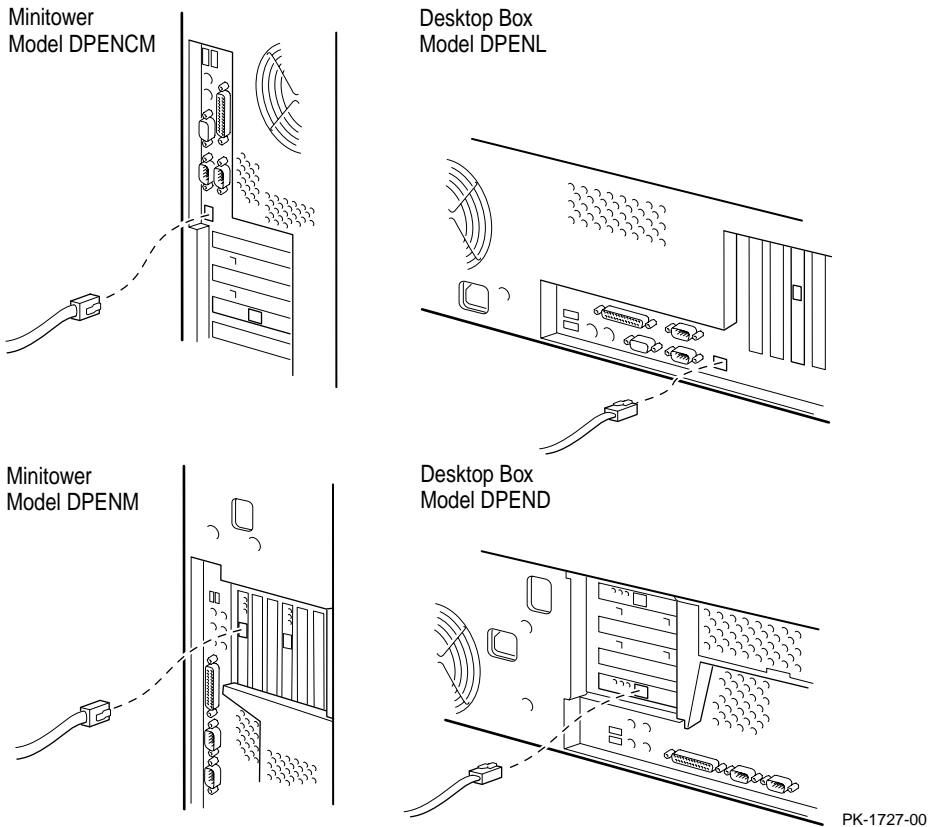


PK-1724-00

4.3 Cable the SMC to the Corporate Network

Connect to the corporate network from the network adapter on the SMC system.

Figure 4-5 Network Adapter 1



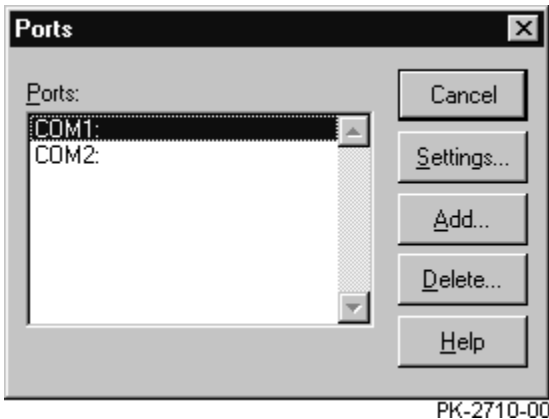
NOTE: *The model type is on a label on the top or side of the SMC box.*

Connect a network cable to network adapter 1 on the SMC system, as shown in Figure 4-5. (This cable is not included in the SMC installation kit.) The network adapters are numbered from left to right on the minitower and from bottom to top on the desktop.

4.4 Check the COM1 Settings

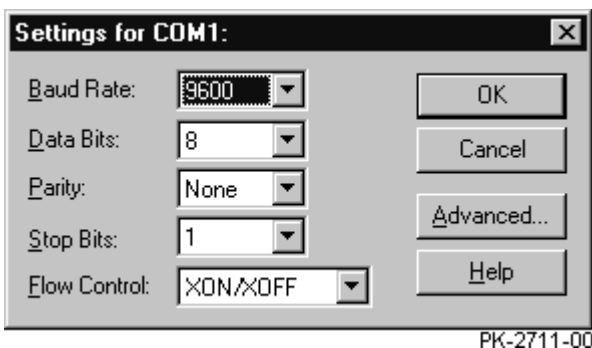
Check that the baud rate for the COM1 port is 9600. Change it if it is set to any other speed. Check the other COM1 settings.

Figure 4-6 Ports Dialog Box



1. From the Start button select Settings | Control Panel.
2. In the control panel, double-click the Ports icon. The Ports dialog box displays (Figure 4-6).
3. Select COM1 and click the Settings... button. The Settings for COM1 dialog box displays (Figure 4-7).
4. If the baud rate displayed is not 9600, change it to 9600. Set the Data Bits to 8, Parity to None, Stop Bits to 1, and Flow Control to XON/XOFF. If these settings are not compatible with your environment, change them to settings that are.

Figure 4-7 Settings for COM1 Dialog Box



Chapter 5

Configuring the SMC Software

The software to be configured depends on the number of consoles in the system.

These sections apply to all systems:

- Set the SMC System Time, Date, and Time Zone
- Configure the Network Connections
- Enter the Mail Server Name in the ConsoleWorks Script
- Configure Outlook Express
- Delete Unused Consoles in ConsoleWorks

These sections apply only to systems that have multiple consoles:

- Configure the Terminal Server: Access Server Loader
- Configure the Terminal Server: Access Server Manager

This section applies only to systems that have a single console:

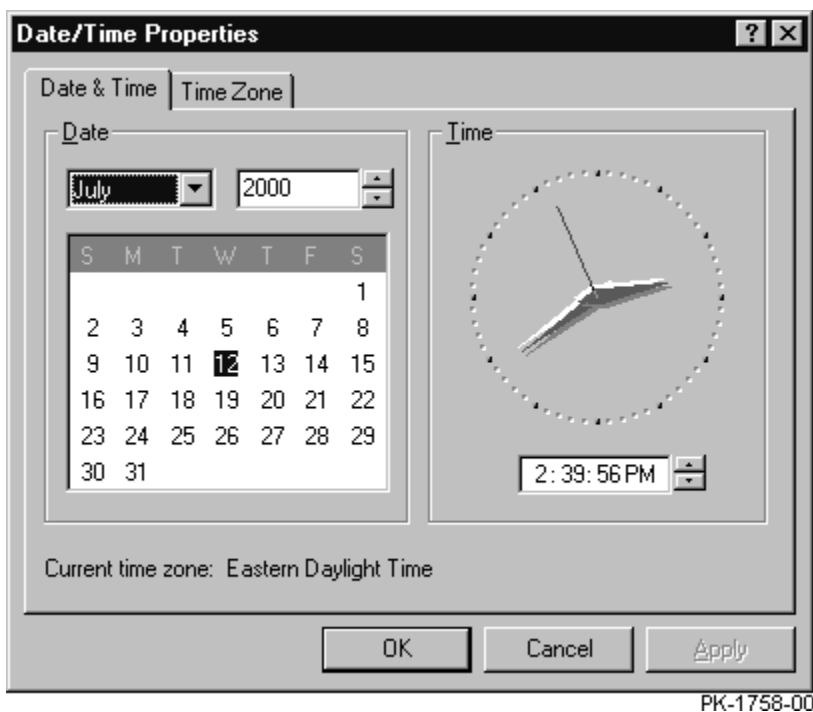
- Replace the ConsoleWorks Configuration File

NOTE: *The GS80/160/320 system should not be powered on at this point. If it is, power it down by turning the keyswitch on the operator control panel to Off and turning off the breakers on the AC input boxes.*

5.1 Set the SMC System Time, Date, and Time Zone

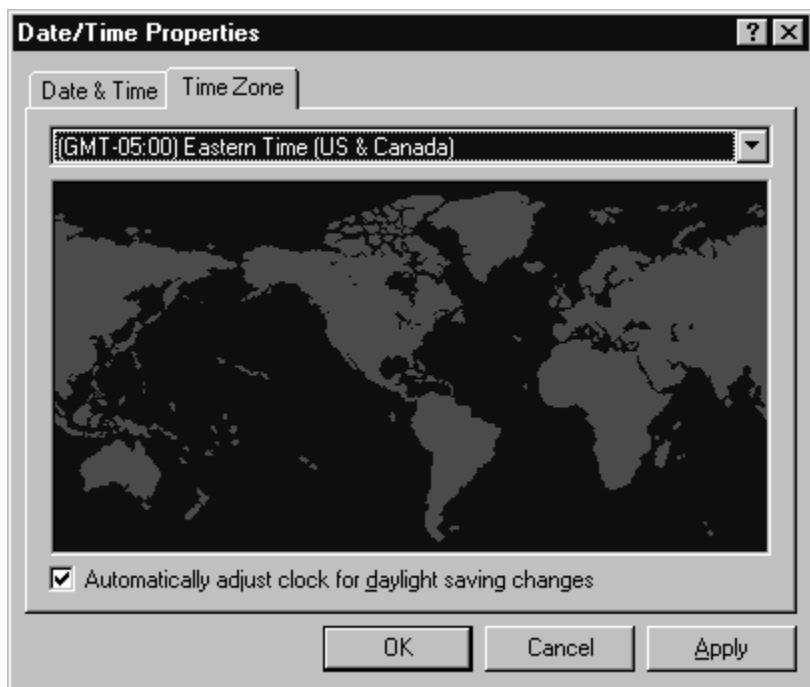
Use the Date/Time icon in the Control Panel to set the time, date, and time zone.

Figure 5-1 Date & Time Tab



1. From the Start button select Settings | Control Panel. The Control Panel window displays.
2. In the Control Panel double-click the Date/Time icon. The Date/Time Properties dialog box displays.
3. In the Date & Time tab, set the date and time (Figure 5–1).
4. Select the Time Zone tab (Figure 5–2).
5. From the drop-down menu select the time zone for this installation. Click OK.

Figure 5-2 Time Zone Tab



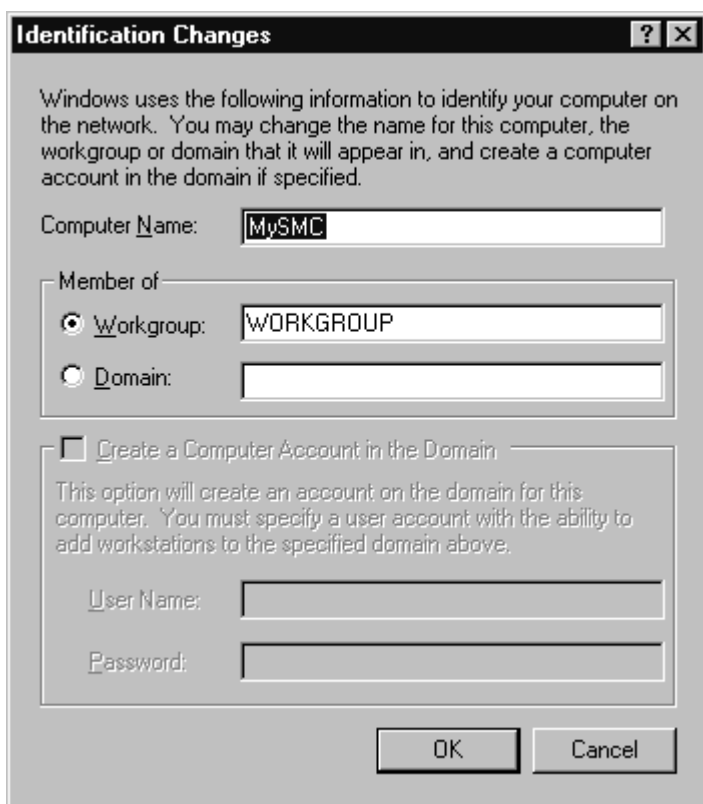
PK-1757-00

5.2 Configure the Network Connections

Verify the computer name and the protocol for the private LAN. Specify the IP address. Finally, set up the adapter for the corporate network.

5.2.1 Verify the Computer Name

Figure 5-3 Identification Changes Dialog Box



PK-1700-00

1. Open the Windows Control Panel: From the Start menu select Settings | Control Panel.
2. Double-click the Network icon. The Network dialog box displays with the Identification tab selected.
3. Click the Change... button. The Identification Changes dialog box displays (Figure 5–3). Check that the box labeled *Computer Name* correctly identifies the SMC system as a management station on the corporate network. (In the example shown in Figure 5–3, that name is MySMC.) If it does not, enter the correct name. Click OK.
4. The system can be a member of a workgroup or a domain. (If you are unsure which it should be, ask the network administrator.) Select the appropriate option button and enter the workgroup or domain name.

NOTE: *The computer name entered in step 3 cannot be GSSMC1. This name is reserved for the terminal server.*

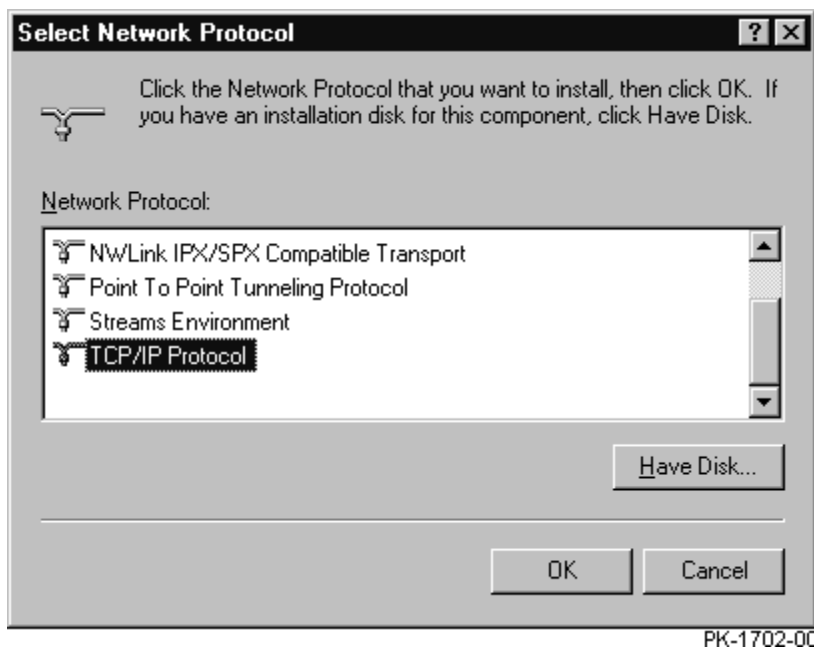
5.2.2 Verify the Network Protocol

Figure 5-4 Network Dialog Box



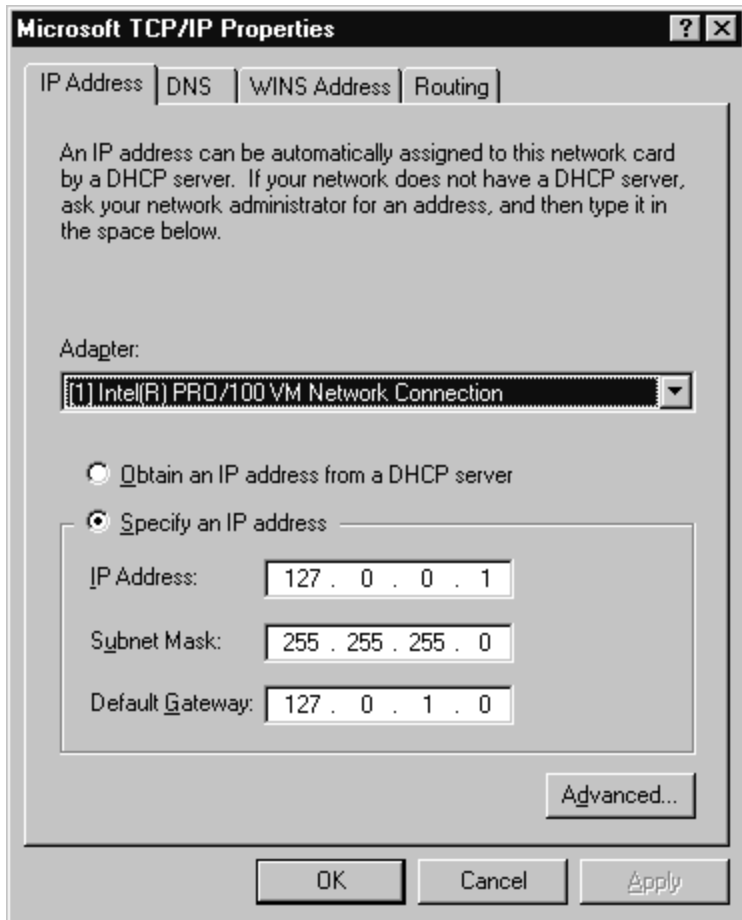
1. In the Network dialog box, select the Protocols tab (Figure 5–4). If the protocol shown is TCP/IP, skip the rest of this page and go on to Section 5.2.3.
2. If the protocol shown is not TCP/IP, highlight the protocol and click the Remove button. A message box displays; click Yes.
3. In the Network dialog box, click the Add... button. The Select Network Protocol dialog box displays (Figure 5–5). Highlight TCP/IP Protocol. Click OK. A box displays with a message that begins “If there is a DHCP server on your network....” Click No.
4. The Windows NT Setup dialog box displays. Click Continue.

Figure 5-5 Select Network Protocol Dialog Box



5.2.3 Configure Network Adapter 1

Figure 5-6 Microsoft TCP/IP Properties



PK-1704-01

NOTE: *The IP address values in the illustration are an example only. Obtain the correct values for this installation from the network administrator.*

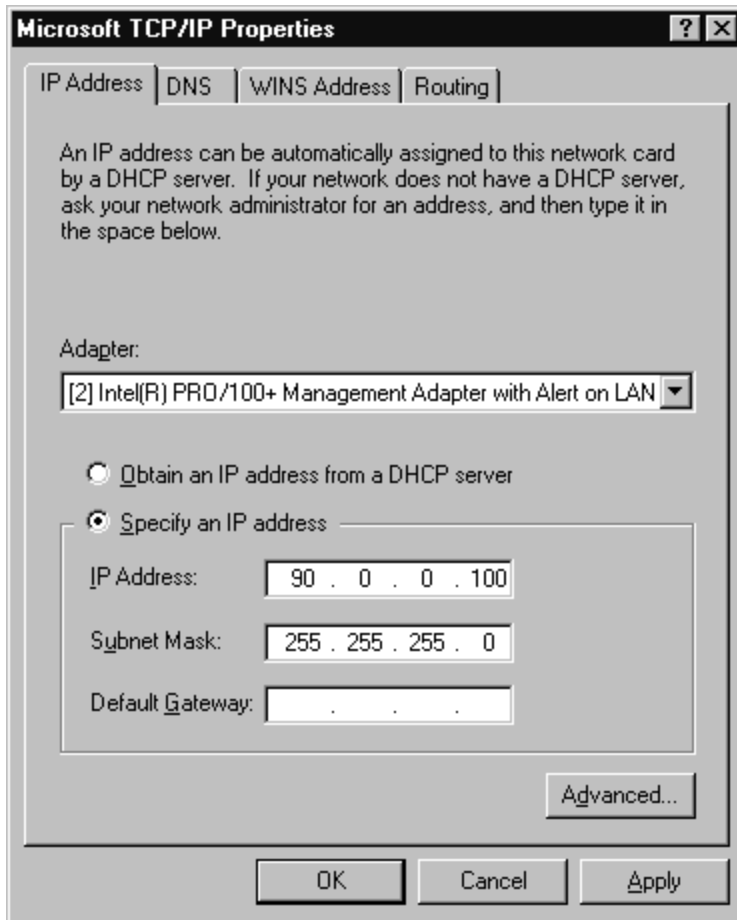
Enter the static IP address, subnet mask, and gateway. Ask the network administrator for this information. The SMC requires a static IP address; it cannot have a dynamic address (that is, an address assigned by a DHCP server).

1. In the Adapter box of the Microsoft TCP/IP Properties dialog box (Figure 5–6), select adapter 1.
2. Select the option button labeled *Specify an IP address*. Enter the IP address, subnet mask, and gateway. Click OK.

NOTE: *The network card shown in Figure 5–6 is an example only. Another type of network card might be supplied.*

5.2.4 Configure Network Adapter 2

Figure 5-7 Microsoft TCP/IP Properties Dialog Box



PK-1729-00

1. In the Network dialog box, select the Protocols tab. Click the Properties button.
2. The Microsoft TCP/IP Properties dialog box displays (Figure 5–7). Select adapter 2.
3. Select the option button labeled *Specify an IP address*. Enter the following information:

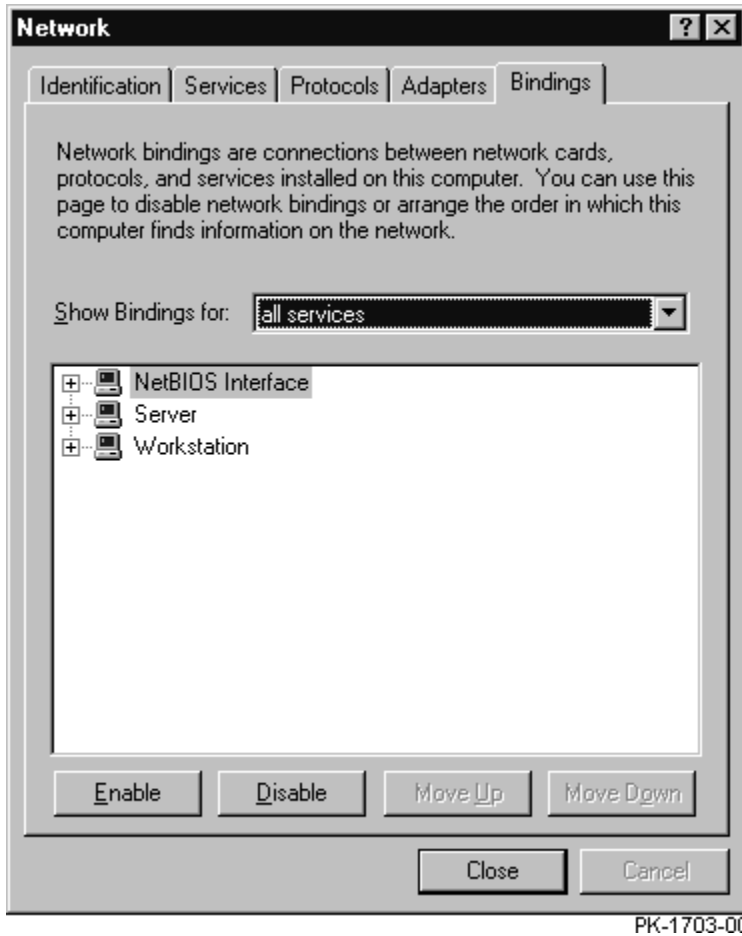
IP address:	90.0.0.100
Subnet mask:	255.255.255.0

Leave the Default Gateway blank. Click OK.

NOTE: *The network card shown in Figure 5–7 is an example only. Another type of network card might be used.*

5.2.5 Bind the Protocol

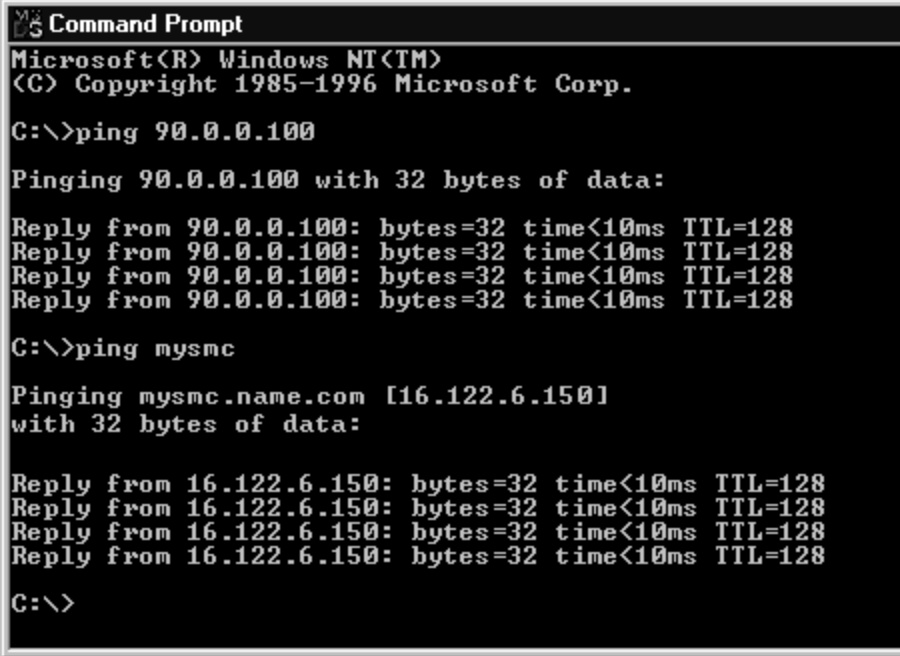
Figure 5-8 Bindings Tab in the Network Dialog Box



1. In the Network dialog box, select the Bindings tab. A box with a progress bar displays.
2. When the progress bar indicates that the operation is finished, click Close.
3. Restart the SMC system.

5.2.6 Verify the Network Setup

Figure 5-9 Verifying the Network Setup



```
Microsoft(R) Windows NT(TM)
(C) Copyright 1985-1996 Microsoft Corp.

C:\>ping 90.0.0.100

Pinging 90.0.0.100 with 32 bytes of data:

Reply from 90.0.0.100: bytes=32 time<10ms TTL=128
Reply from 90.0.0.100: bytes=32 time<10ms TTL=128
Reply from 90.0.0.100: bytes=32 time<10ms TTL=128
Reply from 90.0.0.100: bytes=32 time<10ms TTL=128

C:\>ping mysmc

Pinging mysmc.name.com [16.122.6.150]
with 32 bytes of data:

Reply from 16.122.6.150: bytes=32 time<10ms TTL=128
Reply from 16.122.6.150: bytes=32 time<10ms TTL=128
Reply from 16.122.6.150: bytes=32 time<10ms TTL=128
Reply from 16.122.6.150: bytes=32 time<10ms TTL=128

C:\>
```

PK-1705-00

1. Open a Command window: From the Start menu select Programs | Command Prompt.
2. At the prompt type `ping 90.0.0.100`. The response should look similar to the first command in Figure 5-9.
3. At the prompt type `ping name`, where *name* is the fully qualified computer name displayed in Section 5.2.1. The response should look similar to the second command in Figure 5-9.

5.3 Enter the Mail Server Name in the ConsoleWorks Script

Modify the file MAIL.PL to include the name of the mail server. This file is in the folder C:\Cwks\Actions\Event.

Example 5-1 Modifying the ConsoleWorks Script (MAIL.PL)

```
#!/usr/local/bin/perl
# Note: This is written in a very simple version of Perl for
# non-experts)
# In perl, a single character match is the period ".",
# contrasting with "%" in ConsoleWorks.
# Multi is "*" in both cases.
# Also for WinNT, you can not start a perl file directly,
# though you can in a command window
# Therefore create a single line script MAIL.BAT like this
# C:\Perl\Bin\Perl C:\Cwks\Actions\Event\mail.pl %1 %2 %3 %4
# %5 %6
#+
# Before this can be used, please change the $remote = line in
# the smtpmail subroutine
#

# Mail Action Script
#
# $ARGV[0] Console name
# $ARGV[1] Event Name
# $ARGV[2] Event Sequence Number
# $ARGV[3] Name of event context file
# $ARGV[4] Contact name(s), comma delimited
# $ARGV[5] User Supplied Paramter
#-
use Socket;
sub smtpmail {
    my ($to, $subj, $whoami, $mf, @msg) = @_;
    my ($port, $iaddr, $paddr, $proto, $line);
# This is site specific
    $remote = "my.email.server.name.net"; ❶
    :
    :
    :
if ($domail) {
```

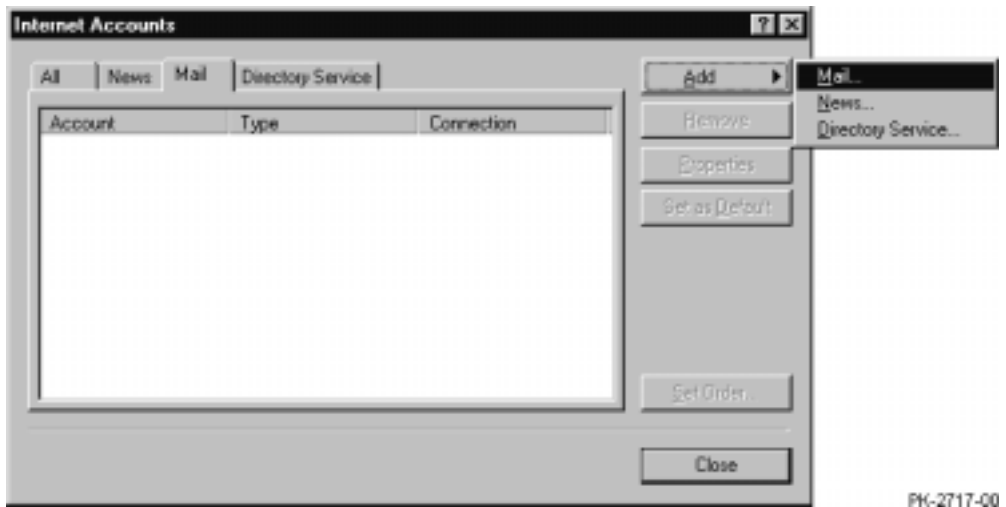
Modify the file MAIL.PL to include the name of the mail server. This file is in the folder C:\Cwks\Actions\Event.

1. Open MAIL.PL in Notepad or another text editor.
2. Find the line '\$remote = "my.email.server.name.net";' (❶ in Example 5-1. The example shows an excerpt from the file; for a full listing of MAIL.PL, see Appendix D.)
3. Obtain the name of the mail server from the network administrator. Replace everything between the double quotes with the server name.
4. Save the file and close the editor.

5.4 Configure Outlook Express

Obtain mail server information from the network administrator before configuring.

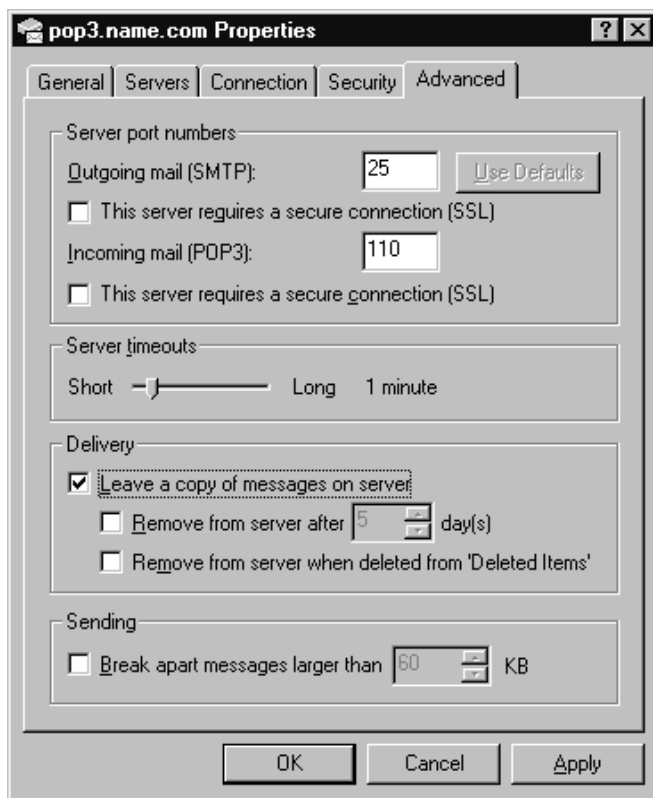
Figure 5-10 Internet Accounts Dialog Box



1. Double-click the Outlook Express icon on the desktop. If this is the first time Outlook Express is opened, a box displays asking where messages should be stored. Select a folder and click OK. The Outlook Express window displays.
2. From the Tools menu select Accounts. The Internet Accounts dialog box displays (Figure 5–10).
3. Select the Mail tab and click the Add button. In the fly-out menu select Mail.... The Internet Connection Wizard displays.
4. The wizard asks for the following information; obtain it from the network administrator:
 - a. The address of the e-mail account that will send and receive mail on the SMC.

- b. The type of server for incoming mail. Outlook Express recognizes POP3 and IMAP.
 - c. The names of the incoming and outgoing mail servers.
- 5. When Outlook Express sends or receives mail, by default it removes the messages from the server. To leave a copy of messages on the server, do the following:
 - a. From the Tools menu select Accounts. In the Internet Accounts window right-click on the account name and select Properties from the pop-up menu. The *account_name* Properties dialog box displays (Figure 5-11).
 - b. Select the Advanced tab. In the section labeled *Delivery* select the checkbox labeled *Leave a copy of messages on server*.

Figure 5-11 *account_name* Properties Dialog Box

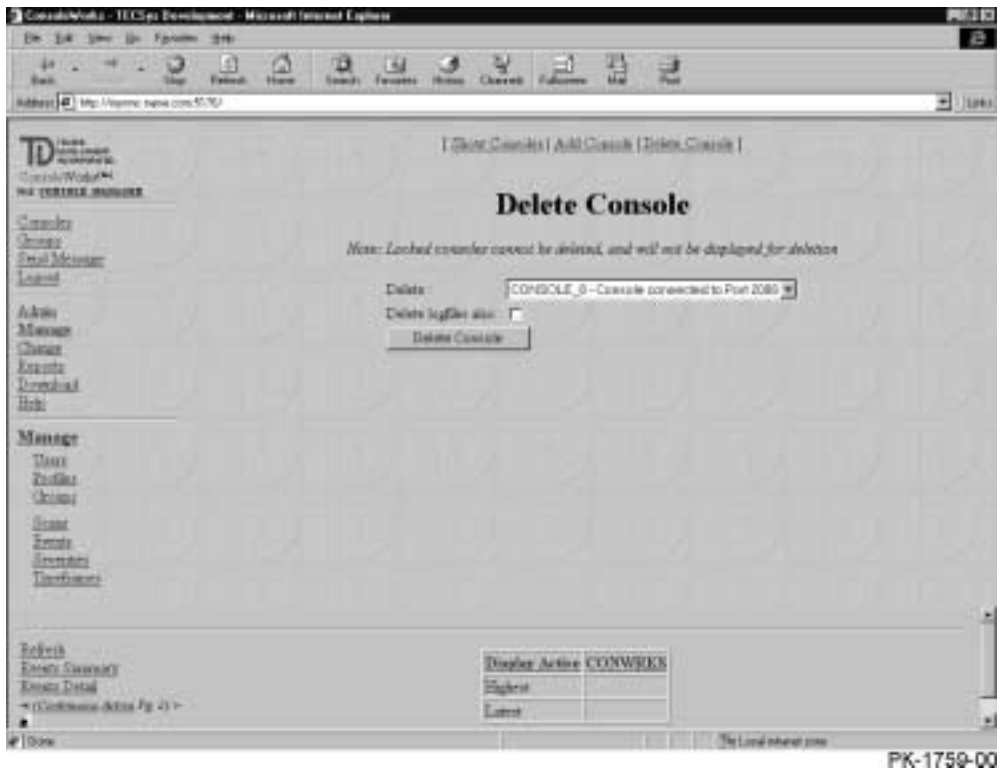


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5.5 Delete Unused Consoles in ConsoleWorks

Start and log on to ConsoleWorks. Select Consoles and Delete Console.

Figure 5-12 ConsoleWorks Delete Console Screen

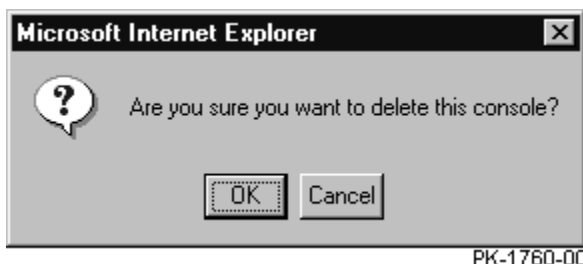


The default configuration for ConsoleWorks is eight consoles. If the GS80/160/320 system has fewer than eight consoles (that is, fewer than eight PCI boxes with standard I/O modules that are connected to the terminal server), delete the extras in ConsoleWorks.

NOTE: *Unused consoles generate a great number of events, causing the log files and the file DEFAULT.CONFIG to grow to an unmanageable size and slow down the system. Deleting unused consoles is strongly recommended.*

1. Start and log on to ConsoleWorks (Section 8.1).
2. In the left navigation panel of the ConsoleWorks window select Consoles. The Show Consoles screen displays.
3. At the top of the Show Consoles screen select Delete Console. The Delete Console screen displays (Figure 5–12).
4. From the Delete dropdown menu select the console to be deleted.
5. Click the Delete Console button. A verification message displays (Figure 5–13).
6. Click OK to delete the console. The Show Consoles screen displays; the deleted console is no longer listed.

Figure 5-13 Delete Console Verification Message

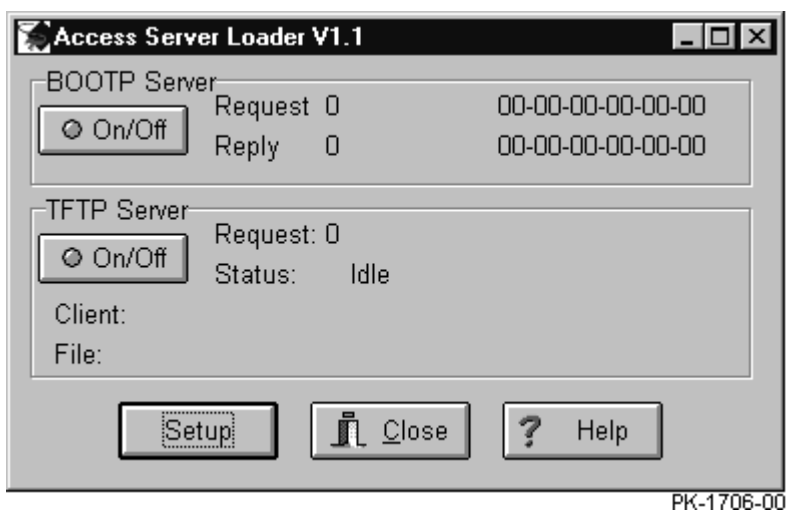


5.6 Configure the Terminal Server: Access Server Loader

Access Server Loader configures the IP address and subnet mask of the terminal server.

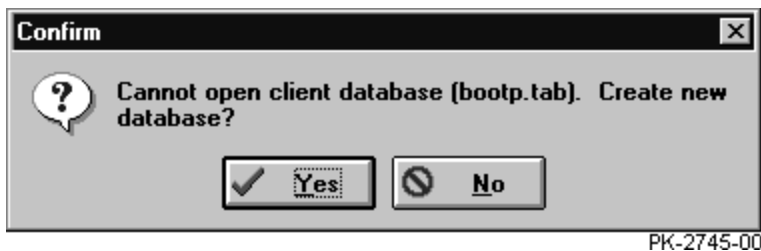
5.6.1 Open Access Server Loader

Figure 5-14 Access Server Loader Window



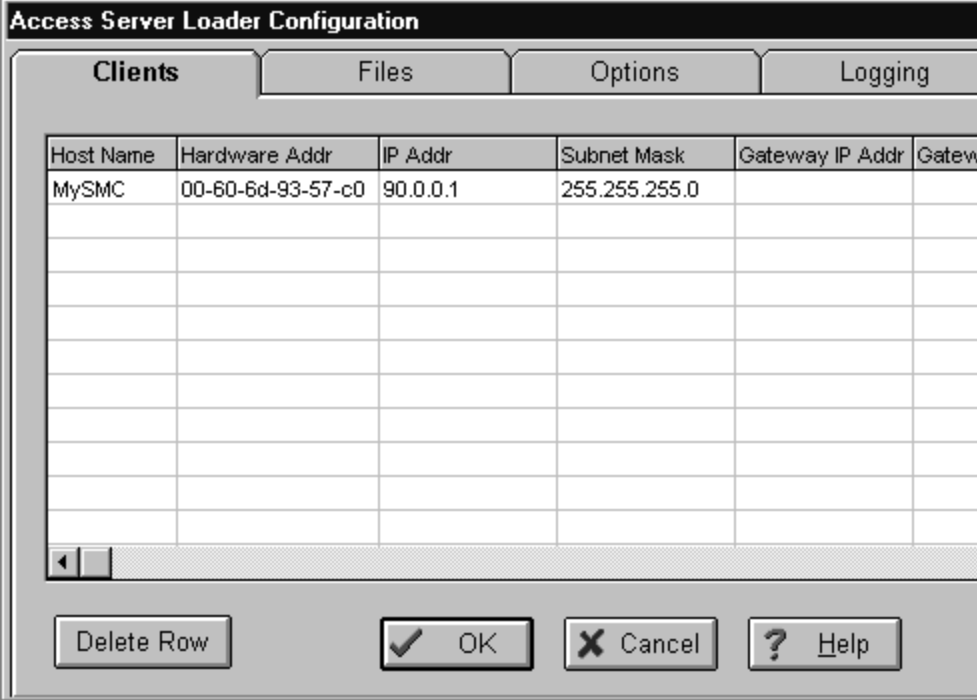
1. Start Access Server Loader: From the Start menu select Programs | Access Server Loader | Access Server Loader. The Access Server Loader window displays (Figure 5-14).
2. Click Setup. The Confirm dialog box displays (Figure 5-15). Click Yes.

Figure 5-15 Access Server Loader Confirm Dialog Box



5.6.2 Create the Database

Figure 5-16 Access Server Loader Configuration Dialog Box



The dialog box is titled "Access Server Loader Configuration". It features four tabs: "Clients", "Files", "Options", and "Logging". The "Clients" tab is currently selected. Below the tabs is a table with six columns: "Host Name", "Hardware Addr", "IP Addr", "Subnet Mask", "Gateway IP Addr", and "Gatew". The first row of the table contains the following data: "MySMC", "00-60-6d-93-57-c0", "90.0.0.1", "255.255.255.0", and empty cells for "Gateway IP Addr" and "Gatew". Below the table is a horizontal scrollbar. At the bottom of the dialog box are four buttons: "Delete Row", "OK" (with a checkmark icon), "Cancel" (with an 'X' icon), and "Help" (with a question mark icon).

Host Name	Hardware Addr	IP Addr	Subnet Mask	Gateway IP Addr	Gatew
MySMC	00-60-6d-93-57-c0	90.0.0.1	255.255.255.0		

PK-1707-00

1. The Access Server Loader Configuration dialog box displays (Figure 5–16). On the Clients tab, enter the following information:

Host Name: computer name (Section 5.2.1)

Hardware Addr: from the label on the terminal server (❶ in Figure 5–17)

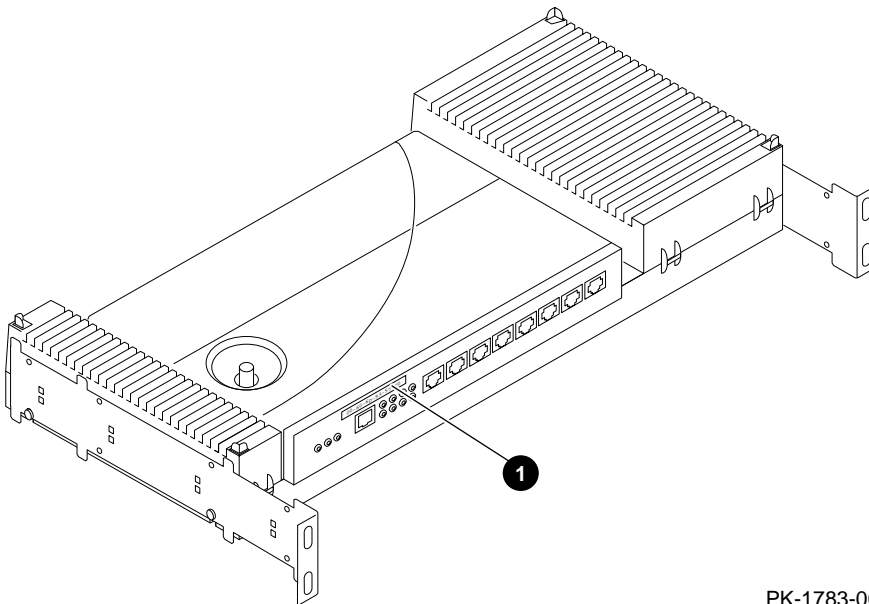
IP Addr: 90.0.0.1

Subnet Mask: 255.255.255.0

NOTE: *The IP address you enter in the Access Server Loader Configuration dialog box is the IP address for the terminal server, not for the host.*

2. Click OK. The Access Server Loader window displays.

Figure 5-17 Location of Hardware Address Label



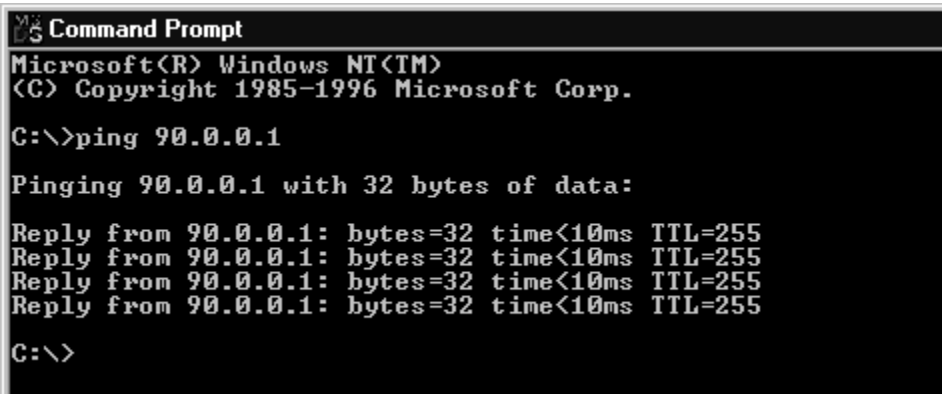
PK-1783-00

5.6.3 Verify the Connection

Figure 5-18 Access Server Loader Window



Figure 5-19 Verifying the Connection



1. Keeping the GS80/160/320 keyswitch in the Off position, turn on the breakers on the AC input boxes.

NOTE: *Turning on the breakers applies power to the terminal server. These instructions assume that the terminal server has not been powered on until now. If it was on when you reached this point, power cycle the terminal server now.*

2. Check the Access Server Loader window (Figure 5–18) for the following:
 - a. The indicators on the BOOTP Server On/Off button and the TFTP Server On/Off button should display green. If an indicator displays red, click the button.
 - b. The hardware address after Reply in the BOOTP Server block should match the hardware address label on the terminal server. If it has been at least one minute since you turned on the AC input box breakers and the addresses do not match, do the following:
 1. Check that the terminal server has power (Section B.4 or C.4).
 2. Check that the cable from the terminal server to the SMC system is connected correctly (Section 3.4).
 3. Check that the position identifier dial on the terminal server is set correctly (Section B.3 or C.3).

If, after performing these three checks, you find that the Request address is still different from the hardware address on the terminal server label, refer to the terminal server documentation.

3. Click the Close button to close Access Server Loader.
4. Verify the connection.
 - a. Open a Command window: From the Start menu select Programs | Command Prompt.
 - b. At the prompt, type `ping 90.0.0.1`. The response should be similar to Figure 5–19.
 - c. Close the Command window.

5.7 Configure the Terminal Server: Access Server Manager

Access Server Manager configures the terminal server for access by the SMC system.

5.7.1 Open Access Server Manager

Figure 5-20 New Access Server Window



The image shows a Windows-style dialog box titled "New Access Server". It contains several input fields: "IP Address" with a dropdown menu showing "90.0.0.1", "Login Password" and "Privileged Password" both masked with "xxxxxx", "Server Name" with the text "GSSMC1", and "Telnet Remote Console TCP Port" with the value "23". Below these fields is a "Tip" section with three numbered instructions. At the bottom are three buttons: "OK", "Cancel", and "Help".

New Access Server

New Access Server

IP Address 90.0.0.1

Login Password xxxxxx

Privileged Password xxxxxx

Server Name GSSMC1

Telnet Remote Console TCP Port 23

Tip: To enter a new access server to the browser:

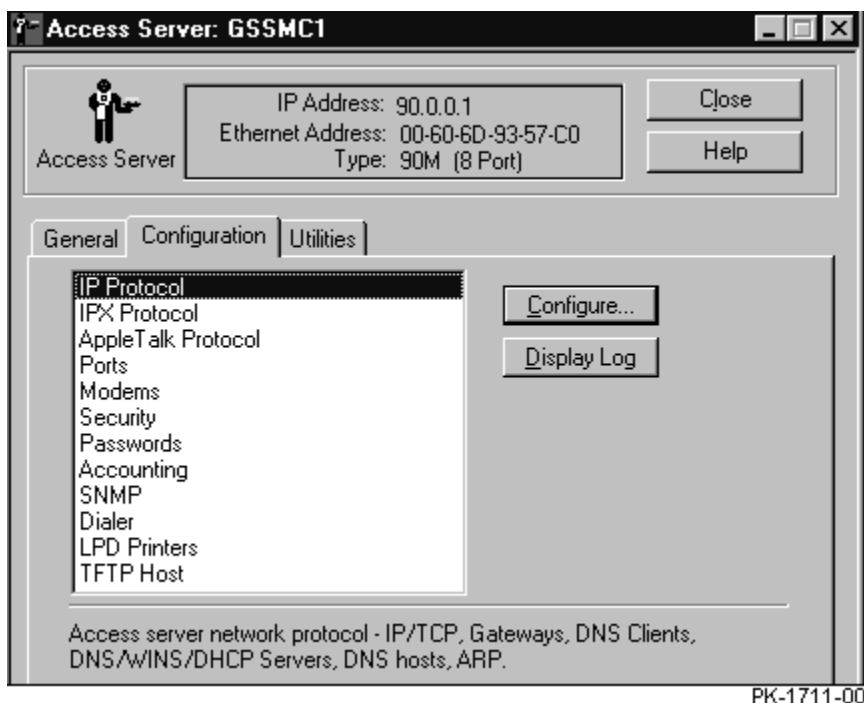
1. Select or enter an IP address for the access server.
2. Enter the passwords if they are different from the defaults.
3. Change the server name if you want another name.

OK Cancel Help

PK-1710-00

1. Start Access Server Manager. From the Start menu select Programs | Access Server Manager | Access Server Manager. The Access Server Manager window displays.
2. From the File menu select New. The New Access Server dialog box displays (Figure 5–20). The default Login Password is **access** and the default Privileged Password is **system**. Click OK.
3. The Access Server dialog box displays (Figure 5–21).

Figure 5-21 Access Server Dialog Box



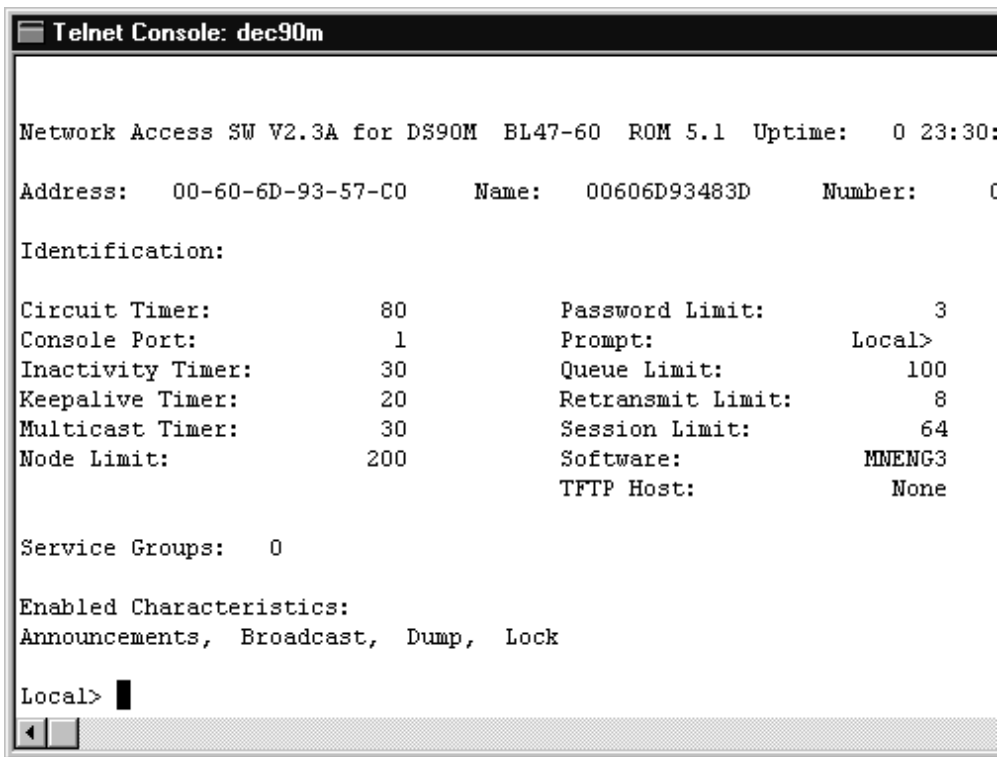
5.7.2 Test the Connection

Figure 5-22 Access Server Dialog Box, Utilities Tab



1. In the Access Server dialog box, select the Utilities tab (Figure 5-22). Select Test Connection. Click the Do It Now... button. The message “Access Server connection test successful” displays. Click OK.
2. Select Connect to Telnet Console. Click the Do It Now... button. The Telnet window displays (Figure 5-23).
3. At the Local> prompt type **show server**. A snapshot of the server displays. This confirms the connection.
4. Close the Telnet window.

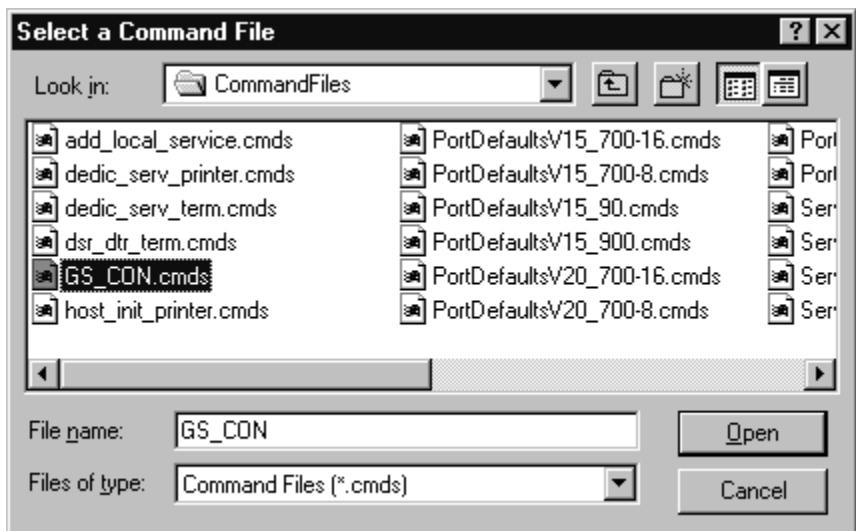
Figure 5-23 Telnet Window



PK-1712-00

5.7.3 Configure Access Server Manager

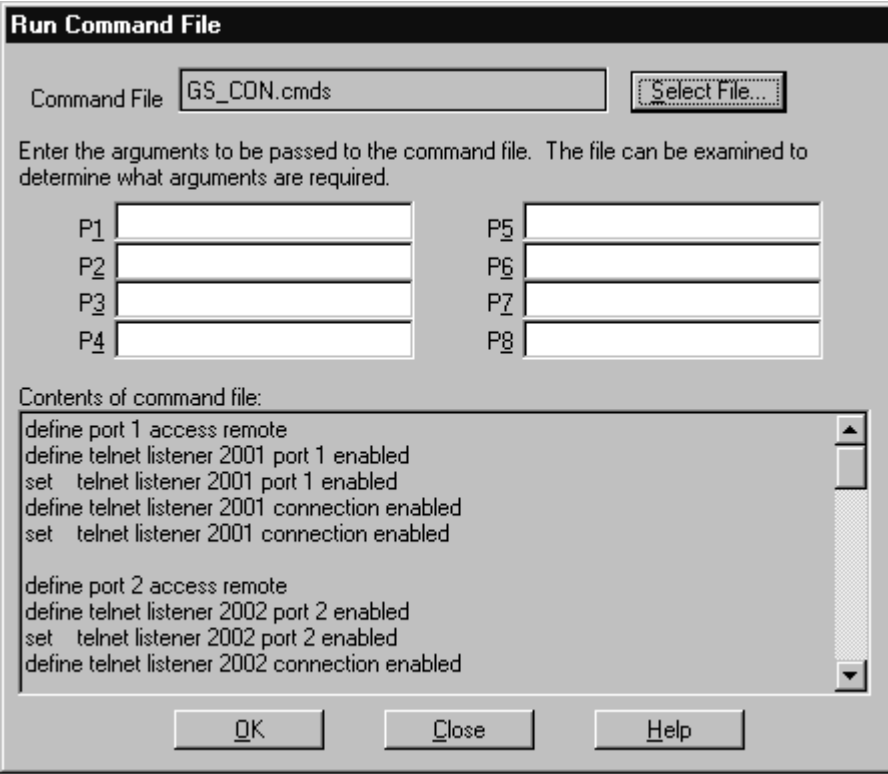
Figure 5-24 Select a Command File Dialog Box



PK-2747-00

1. From the Utilities tab of the Access Server dialog box (Figure 5-22), select Run Command File.
2. Click the Do It Now... button. The Select a Command File dialog box displays (Figure 5-24).
3. Select the file GS_CON.cmds. Click Open. The Run Command File dialog box displays (Figure 5-25). Click OK. The command file runs.
4. Close the Access Server dialog box and return to Access Server Manager.
5. Close Access Server Manager.

Figure 5-25 Run Command File Dialog Box



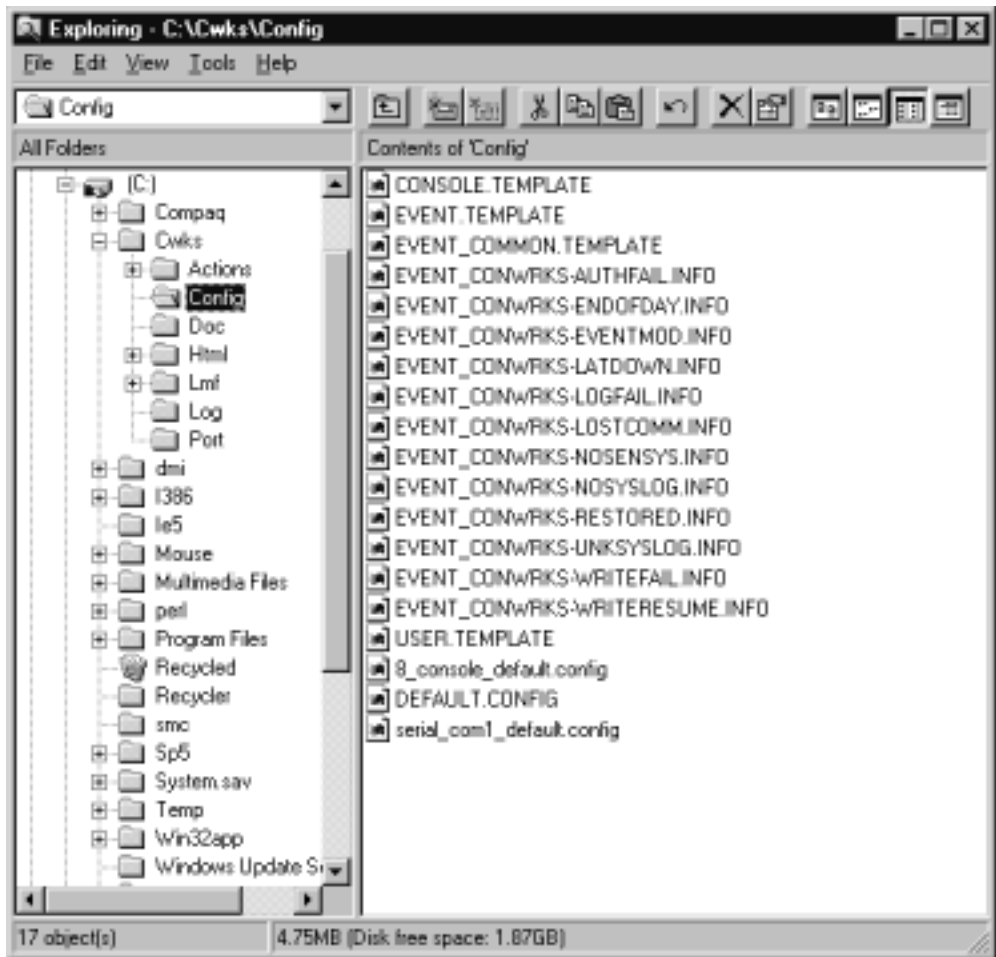
The image shows a 'Run Command File' dialog box. At the top, the title bar reads 'Run Command File'. Below the title bar, there is a text field labeled 'Command File' containing the text 'GS_CON.cmds'. To the right of this field is a button labeled 'Select File...'. Below the text field, there is a paragraph of text: 'Enter the arguments to be passed to the command file. The file can be examined to determine what arguments are required.' Below this text, there are two columns of text input fields. The left column has four fields labeled P1, P2, P3, and P4. The right column has four fields labeled P5, P6, P7, and P8. Below these fields, there is a section titled 'Contents of command file:' followed by a text area containing the following text: 'define port 1 access remote', 'define telnet listener 2001 port 1 enabled', 'set telnet listener 2001 port 1 enabled', 'define telnet listener 2001 connection enabled', 'set telnet listener 2001 connection enabled', 'define port 2 access remote', 'define telnet listener 2002 port 2 enabled', 'set telnet listener 2002 port 2 enabled', and 'define telnet listener 2002 connection enabled'. At the bottom of the dialog box, there are three buttons: 'OK', 'Close', and 'Help'.

PK-1713-00

5.8 Replace the ConsoleWorks Configuration File

The default configuration file put in place by the SMC installation process is for multiple-console systems. If this system has only one console, replace the configuration file.

Figure 5-26 Configuration Files Folder



PK-2720-00

1. In Windows Explorer go to the folder C:\Cwks\Config (Figure 5–26).
2. Copy the file SERIAL_COM1_DEFAULT.CONFIG:
 - a. Click on the file to highlight it.
 - b. From the Edit menu select Copy.
3. From the Edit menu select Paste. A file named Copy of SERIAL_COM1_DEFAULT.CONFIG is pasted into the folder.
4. Delete the file DEFAULT.CONFIG.
5. Rename the file Copy of SERIAL_COM1_DEFAULT.CONFIG to DEFAULT.CONFIG:
 - a. Click on the file to highlight it.
 - b. From the File menu select Rename.
 - c. In the highlighted name enter DEFAULT.CONFIG.

Chapter 6

Configuring the SMC for Remote Use

Sections in this chapter are:

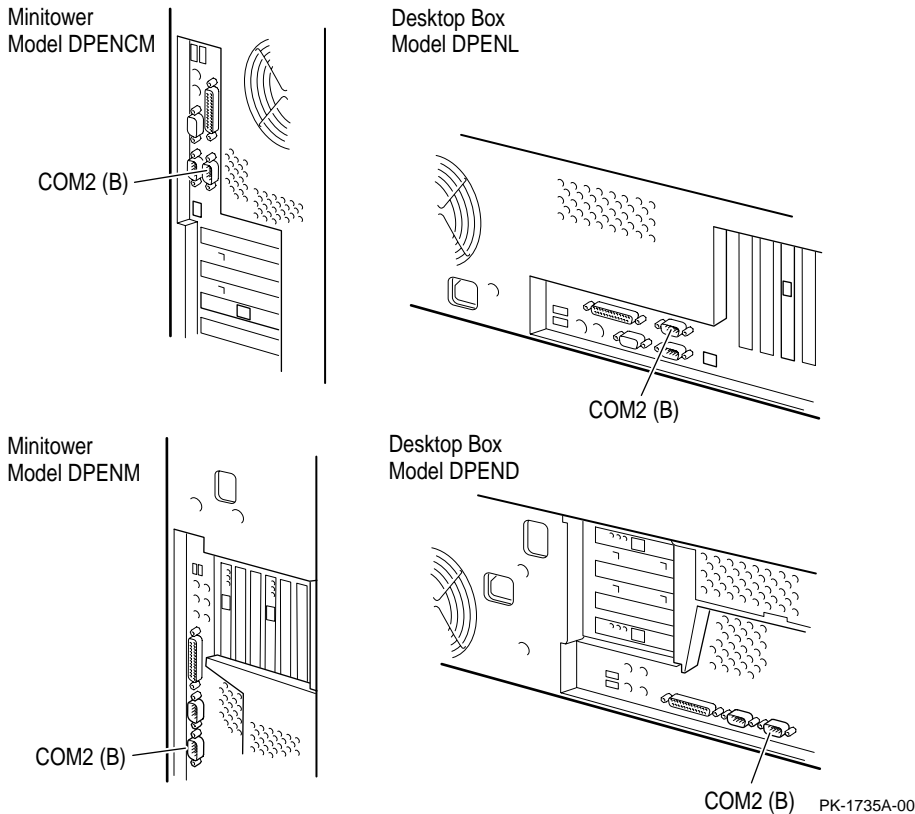
- Set Up the Modem
- Configure the Remote Access Software

NOTE: *When you have finished setting up the modem and configuring the remote access software, restart the SMC system and set the keyswitch on the GS80/160/320 to On.*

6.1 Set Up the Modem

Follow the manufacturer's instructions for cabling the modem.

Figure 6-1 COM2 Port

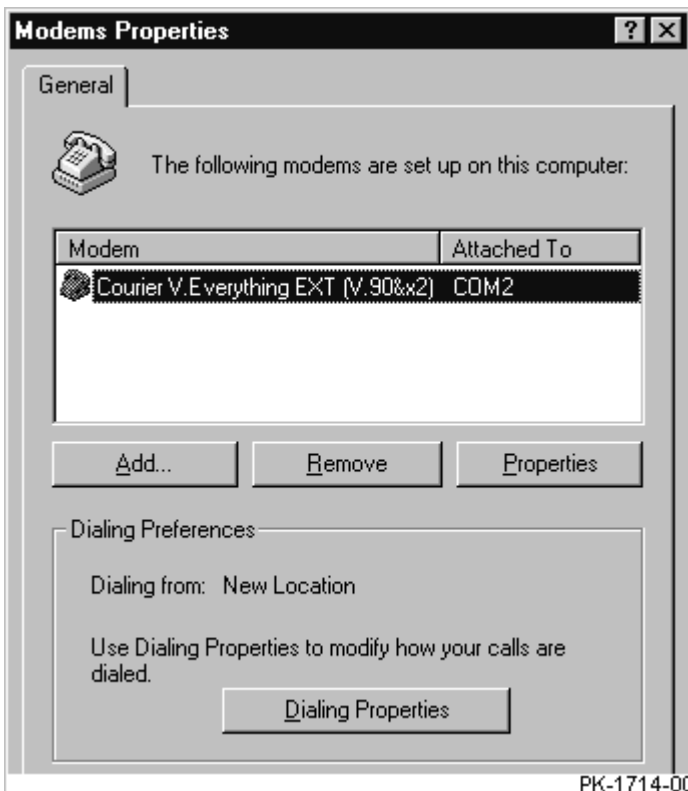


NOTE: *The model type is on a label on the top or side of the SMC box.*

1. Cable the modem, following the manufacturer's instructions. Connect the RS-232C cable from the SMC installation kit to COM2 on the SMC system (Figure 6-1; COM2 might be marked B).

2. Open the Control Panel: From the Start menu select Settings | Control Panel.
3. Double-click the Modems icon. The Install New Modem dialog box displays. Click Next. The operating system detects the modem and tests it.
4. The Install New Modem dialog box displays, with the words Standard Modem in the box. Click the Change... button. Click the Have Disk... button. Insert the disk that came with the modem in the appropriate drive.
5. In the dialog box click the Browse button, and select the drive and file. Select the modem type.
6. Check that the Modem Properties box (Figure 6-2) displays, indicating that the modem has installed correctly.

Figure 6-2 Modem Detected



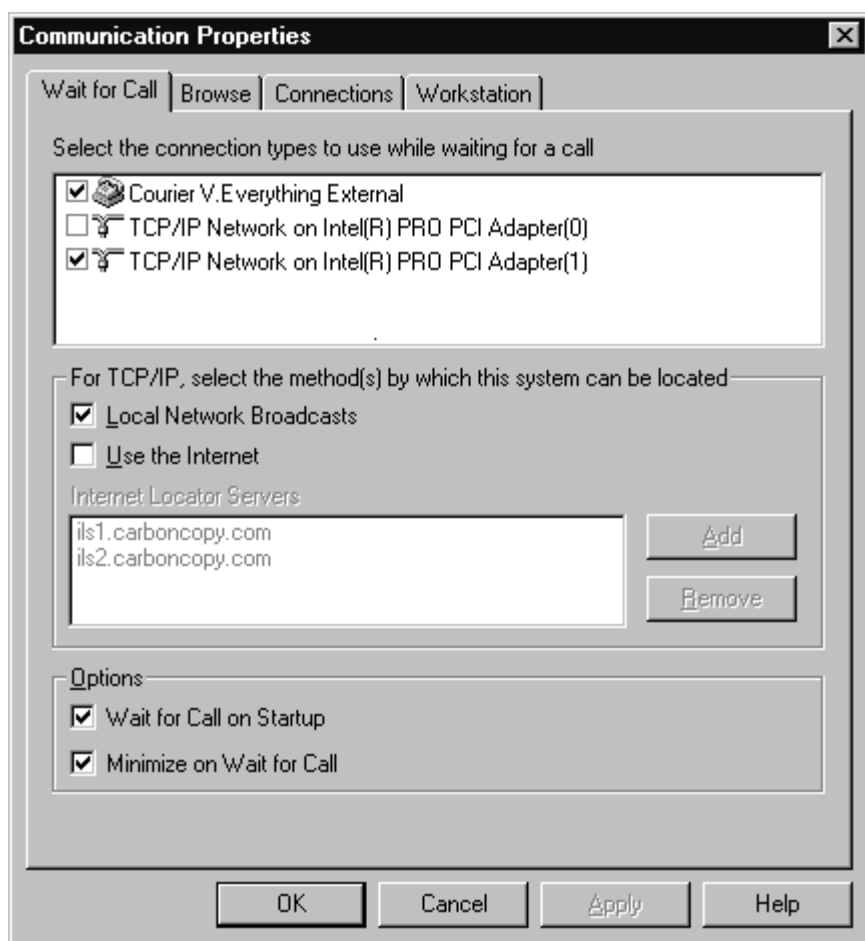
PK-1714-00

6.2 Configure the Remote Access Software

Configure both remote access applications, Carbon Copy Access Edition and WinVNC.

6.2.1 Carbon Copy Access Edition

Figure 6-3 Communication Properties Dialog Box



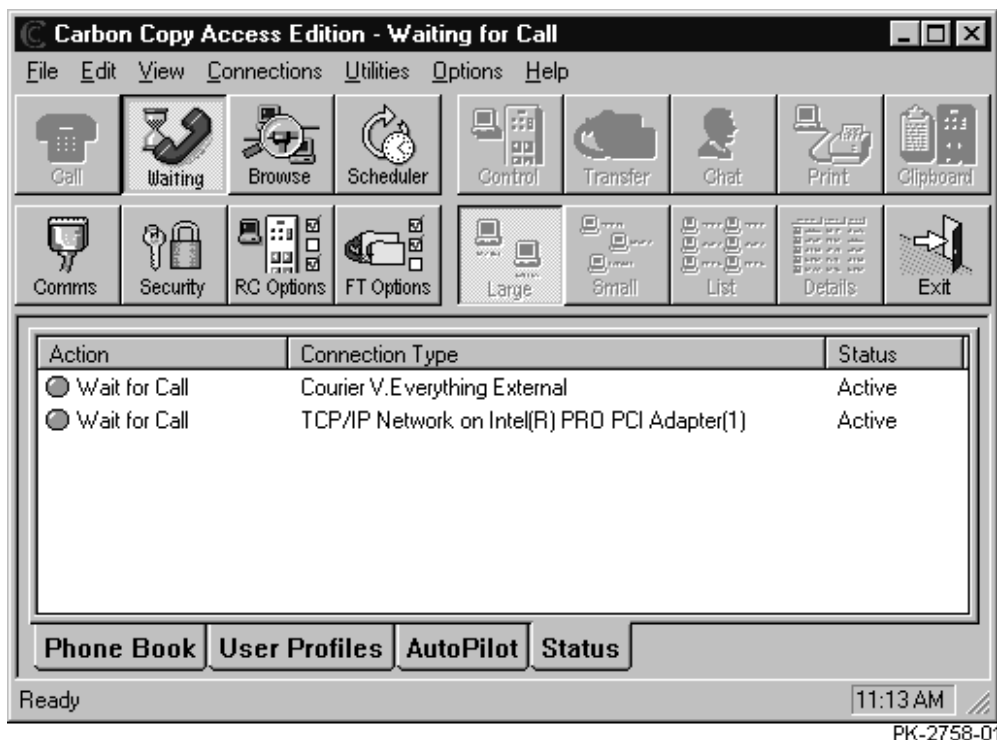
PK-2757-01

1. Start Carbon Copy Access Edition: From the Start menu select Programs | Carbon Copy Access Edition | Carbon Copy.
2. From the Options menu select Communications. The Communication Properties dialog box displays (Figure 6–3).

NOTE: Check with the customer before setting up the Wait for Call feature.

3. In the tab labeled *Wait for Call*, select the modem and the corporate network in the box labeled Select the connection types. In the Options block, select Wait for Call on Startup. Click OK.
4. In the Carbon Copy Access Edition window (Figure 6–4), click the Wait for Call button. If you selected Minimize on Wait for Call in the Communication Properties dialog box, the program now minimizes.

Figure 6-4 Carbon Copy Access Edition Window



6.2.2 WinVNC

Figure 6-5 Default Local System Properties Dialog Box



1. Display the WinVNC settings: from the Start menu select Programs | VNC | Administrative Tools | Show Default Settings. The Default Local System Properties dialog box displays (Figure 6–5).
2. Enter a password and select the checkboxes shown in Figure 6–5.

Part 3

Using the System Management Console

Chapter 7

Getting Started with the System Management Console

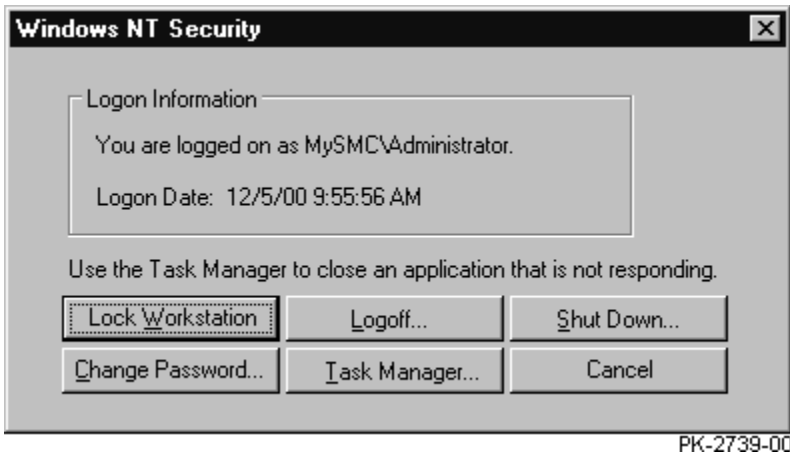
Sections in this chapter are:

- Logging on to the SMC
- Using the SMC Locally
- Using the SMC Remotely
- Keep in Mind

7.1 Logging on to the SMC

Logon is automatic if the administrator account has no password. For manual logon, a different account can be used, or the administrator account can be given a password.

Figure 7-1 Windows NT Security Window



The SMC system is configured to log on to the administrator account automatically when it powers up. If you leave the administrator account with the default configuration (that is, without a password), you can log on to another account by following these instructions.

1. Close all applications.
2. Press **Ctrl+Alt+Del**. The Windows NT Security window displays (Figure 7-1).
3. Click **Logoff...**. A window displays with the message "This will end your Windows NT session."
4. Click **OK** and immediately depress and hold the **Shift** key. Hold this key until the Log On dialog box displays.
5. Enter a username and password that are valid for this system. Click **OK**.

If the administrator account is reconfigured to use a password, the Log On dialog box always displays when the PC powers up. You can give that account a password by following these instructions.

1. Press **Ctrl+Alt+Del**. The Windows NT Security window displays (Figure 7-1).
2. Click Change Password... The Change Password dialog box displays (Figure 7-2).
3. Enter the old password and the new one, and enter the new password again to confirm it. (The passwords display as asterisks.) Click OK.

Figure 7-2 Change Password Dialog Box



PK-2740-00

7.2 Using the SMC Locally







Icons on the SMC desktop are used to run applications locally.

Figure 7-3 SMC Desktop



The SMC desktop has several icons that enable you to run applications and view documentation online. Table 7-1 shows the icons and describes the result of double-clicking each.

Table 7-1 SMC Desktop Icons

Icon	Function
	Runs ConsoleWorks, the console management application used by the SMC. See Chapter 8 for a quick reference and the <i>ConsoleWorks Administration/User Guide</i> for more in-depth information. <i>NOTE: Since ConsoleWorks runs in the Internet Explorer browser, the first time you start it, the Internet Explorer Setup Wizard runs. You will need to supply connection information, including proxies if applicable.</i>
	Runs Compaq AlphaServer Partition Manager (CAPM), an application that simplifies the creation of partitions on the GS80/160/320 system. Chapter 9 describes this application.
	Displays a PDF file of the <i>AlphaServer GS80/160/320 System Management Console Installation and User's Guide</i> (this manual). PDF files are viewed online and can be printed.
	Displays a PDF file of the <i>ConsoleWorks Administration/ User Guide</i> .
	Displays version information for the SMC release and all software distributed on the SMC software CD.
	Opens the SMC Web page (see Section 7.3).

7.3 Using the SMC Remotely

The SMC Web page is used to run applications remotely.

Figure 7-4 SMC Web Page



PK-2731-00

To display the SMC Web page from a system that is networked to the SMC system and running Windows, open a Web browser and enter the address `http://name.domain:2301/smc/smc.htm`, where *name.domain* is the fully qualified address or the IP address of the SMC system on the corporate network; press Enter. The supported browsers are Internet Explorer V5.0 or later and Netscape V4.7 or later.¹ Browsers must have Java and JavaScript enabled.

To display the SMC Web page on a system with a browser that does not work with JavaScript, DOM and DHTML, enter this in the Address box: `http://name.domain:2301/smc/smca.htm`. Before viewing it the first time, edit SMCA.HTM to change all occurrences of “localhost” to the fully qualified address or the IP address of the SMC system.

You can run these applications and view these documents from the SMC Web page:

ConsoleWorks – ConsoleWorks is the console management application used by the SMC. See Chapter 8 for a quick reference and the *ConsoleWorks Administration/User Guide* for more in-depth information.

Compaq AlphaServer Partition Manager (CAPM) – CAPM simplifies the creation of partitions on the GS80/160/320 system. Chapter 9 has instructions for using this application. CAPM requires that JRE 1.3.0_01 or later be installed on the system from which it is run.

Compaq Insight Manager (CIM) – Insight Manager is a system management product that monitors the operations of Compaq servers, workstations, desktops, and portables.

SMC User's Guide – This link is to a PDF file of the *AlphaServer GS80/160/320 System Management Console Installation and User's Guide* (this manual). PDF files are viewed online and can be printed. Acrobat Reader 4.05c or later is required.

ConsoleWorks User's Guide – This is a link to the PDF file for the *ConsoleWorks Administration/User Guide*.

You can also check the software version of all SMC applications from the SMC Web page. To do this, click the Version Details link at the upper right of the page.

¹ Netscape V6.0 running on Windows 98 is not supported.

7.4 Keep in Mind

Keep these points in mind when you use the system management console.

- An SMC may be used with only one GS80/160/320 system. Do not attach it to multiple systems or other equipment.
- The GS80/160/320 SCM and SRM may not have associated passwords.
- The SCM escape sequence must be the default, **<Esc><Esc>scm**.
- The SMC requires a static IP address.
- In the SMC Web page, use the IP address or the fully qualified system name for the SMC system. Do not use *localhost*.
- In order for CAPM to run, ConsoleWorks services must be running, but the ConsoleWorks application must be closed. In addition, the CAPM service must be running. If CAPM is run from the SMC Web page, the SMC HMMO service must also be running.

Chapter 8

ConsoleWorks

ConsoleWorks is a Web-based application that monitors and logs output from the GS80/160/320 consoles.

This chapter provides a quick reference for the procedures most commonly performed on a GS80/160/320 system management console (SMC). For more information about ConsoleWorks, see the *ConsoleWorks Administration/User Guide*. (You can open this manual from the desktop icon on the SMC system or from the link on the SMC Web page.)

Sections in this chapter are:

- Starting ConsoleWorks
- Overview of ConsoleWorks
- ConsoleWorks Screen
- Managing Consoles
 - Loading Certificate Authority
 - Deleting a Console
 - Adding a Console
 - Renaming a Console
- Managing Events and Actions
 - Adding an Event
 - Importing and Using Compaq-Supplied Events
 - Enabling an Action
 - Adding a Scan
 - Acknowledging and Purging Events
 - Expunging Events
- Managing Users
 - Adding a User
 - Communicating with Another User
 - Changing a User Password
 - Adding a Profile
 - Modifying a Profile
- Managing ConsoleWorks Log Files
 - Viewing a Log File
 - Deleting Log Files
 - Mailing a Log File
- Saving the Configuration
- Using KEA! with ConsoleWorks

8.1 Starting ConsoleWorks

Start ConsoleWorks from the desktop icon or from the SMC Web page.

Figure 8-1 SMC Web Page



You can run ConsoleWorks from the SMC system or from a workstation networked to the SMC system.

- To run ConsoleWorks from the SMC system, double-click the ConsoleWorks desktop icon:



- To run ConsoleWorks from a workstation networked to the SMC system, click the icon on the SMC Web page (Figure 8–1). To display the SMC Web page on a system running Windows, enter this in the browser Address box: `http://name.domain:2301/smc/smc.htm`, where *name.domain* is the fully qualified address or the IP address of the SMC on the corporate network; press Enter. To display the SMC Web page on a system with a browser that does not work with JavaScript, DOM and DHTML, enter this in the Address box: `http://name.domain:2301/smc/smca.htm`.

Logging on to ConsoleWorks

When you start ConsoleWorks, a logon screen displays. The first time you log on, use these defaults:

Username: `console_manager`

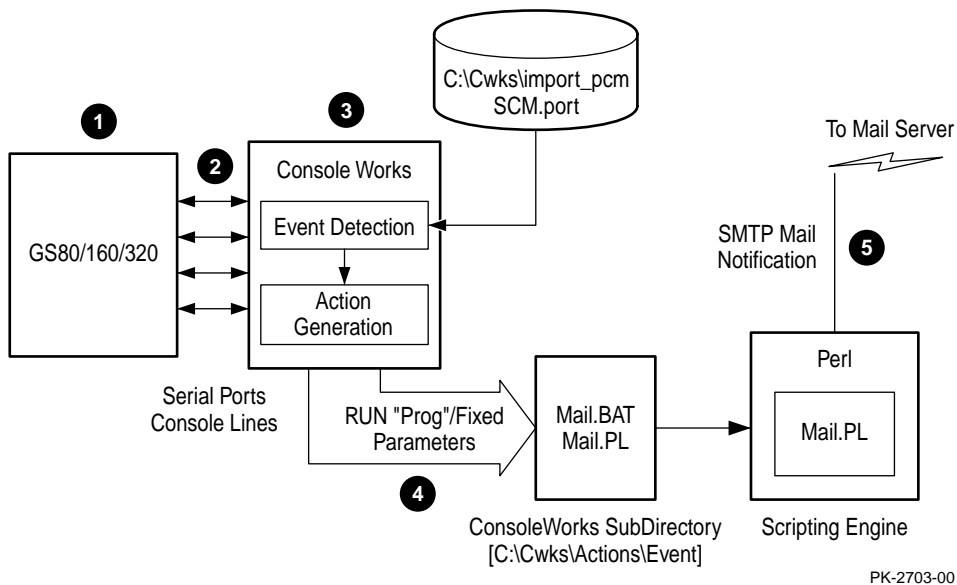
Password: `setup`

Section 8.6.1 has instructions for creating other user accounts.

8.2 Overview of ConsoleWorks

ConsoleWorks is a Web-based application that monitors console output and provides console management functions. Compaq provides a script that customizes ConsoleWorks for the system management console and GS80/160/320 environment.

Figure 8-2 ConsoleWorks Application and Script



ConsoleWorks is a Web-based application that manages consoles in a GS80/160/320 system. A console can be a partition or the entire system if it is not partitioned. The SMC system administrator determines the consoles to which a user has access and the level of that access. The level of access is indicated by a profile; each user is associated with one or more profiles.

ConsoleWorks provides access to each console directly from the SMC. In addition, KEA! can be used with ConsoleWorks to display console activity. Alternatively, you can use a supported Web browser to access each console remotely from a workstation connected to the private LAN or to the corporate network. The output from each console is logged to a file for future viewing.

ConsoleWorks monitors console output for events, text strings in a console's SCM or SRM output. Each event is part of one or more scans, or collection of events. A scan, in turn, is associated with one or more consoles.

Compaq has customized the ConsoleWorks application used in the SMC to monitor for particular events and to send mail to user-specified recipients when those events occur. The diagram in Figure 8-2 shows the actions that take place when ConsoleWorks recognizes an alert; callouts are described here:

- ❶ The GS80/160/320 system generates a console alert. (This does not include operating system alerts.)
- ❷ As with all console activity, the alert travels through the GS80/160/320 serial port and over the console line to the SMC.
- ❸ ConsoleWorks monitors all activity on the console line. It detects an event based on information in the file SCM.PORT and generates an action.
- ❹ The action taken by ConsoleWorks is to run the file MAIL.BAT, which in turn runs MAIL.PL.
- ❺ The scripting agent interprets MAIL.PL and sends SMTP mail to the mail server, which delivers it to the specified recipient. Figure 8-3 shows a representative mail message.

Figure 8-3 Mail Message from ConsoleWorks

```
sys [/]>
sys [/]> mail
From ConsoleWorks@smcpc.my.domain Fri Sep 22 10:06:38 2000
Received: by sys.name.com id KAA182194; Fri, 22 Sep 2000 10:06:34 -0400 (EDT)
Date: Fri, 22 Sep 2000 10:06:34 -0400 (EDT)
From: <ConsoleWorks@smcpc.my.domain>
Message-Id: <200009221406.KAA182194@sys.name.com>
Subject: Console CONWPRS has Encountered Event CONWPRS-EVENTMOD (Sequence 950)
To: root@sys.name.com>

SERVER: smcpc
PORT: 5176
CONSOLE: CONWPRS
NAME: CONWPRS-EVENTMOD
SEQUENCE: 950
DESCRIPTION: ConsoleWorks events were modified
TIME: Sep 22 10:12:38 2000
PRIORITY: 99
SEVERITY: INFORMATIONAL
TEXT: CONWPRS-EVENTMOD
CONTEXT_BEGIN:
CONSOLE_MANAGER modified event CONWPRS-EVENTMOD
CONTEXT_END:
```

PK-2715-00

The ConsoleWorks screen is divided into three sections: left navigation panel, main data panel, and lower navigation panel.

1

2

3

PK-1754-00

Figure 8–4 shows the first screen that displays after you log in to ConsoleWorks. The three parts of the screen are described below.

- ❶ **Left navigation panel** – This panel is divided into three segments (from top to bottom):
 - Function links (Consoles, Groups, Send Message, and Logout). Clicking any of these results in either the display of new information in the main data panel or the display of a new popup window.
 - Menu links (Admin, Manage, Change, Reports, Download, and Help). Clicking any of these links causes the display in the lower third of the left navigation panel to change to the related selection links.
 - Selection links. This list changes depending on which menu link is chosen. Clicking on most of these links causes the display of new information in the main data panel, but a few result in the display of a new popup window.
- ❷ **Main data panel** – Most configuration information and data display in this panel.
- ❸ **Lower navigation panel** – On the left are links, status, and the mailbox icon; on the right is the ConsoleWorks status display table.

ConsoleWorks provides access to each console line in a GS80/160/320 system directly from the SMC.

ConexeWorks - TECEps Development - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Home Search Favorites History Clear All Favorites Mail Print

Address http://www.nsp.com/576/

Conexos

Conexos Manager

Admin

Manage

Conexos

Download

Help

Manage

Users

Profiles

Groups

Groups

Downloads

[Show Consoles | Add Console | Index Console]

Show Consoles

Console	Description	Status	Log Directory
CONSOLE_1	Console connected to Fort 2001	NORMAL	D:\CW\LOG
CONSOLE_2	Console connected to Fort 2002	NORMAL	D:\CW\LOG
CONSOLE_3	Console connected to Fort 2003	NORMAL	D:\CW\LOG
CONSOLE_4	Console connected to Fort 2004	NORMAL	D:\CW\LOG
CONSOLE_5	Console connected to Fort 2005	NORMAL	D:\CW\LOG
CONSOLE_6	Console connected to Fort 2006	NORMAL	D:\CW\LOG
CONSOLE_7	Console connected to Fort 2007	NORMAL	D:\CW\LOG
CONSOLE_8	Console connected to Fort 2008	NORMAL	D:\CW\LOG
CONEXOS	ConexeWorks	NORMAL	D:\CW\LOG

Display Active CONEXOS

Highest

Latest

Local intranet.com


8-8 SMC Installation and User's Guide

ConsoleWorks is used to manage the console lines in a GS80/160/320 system.

To find information about a console line, start by clicking the Consoles link in the left navigation panel of any ConsoleWorks screen to display the Show Consoles screen (Figure 8–5). From there you can view a console line's activity or its configuration, delete a console (Section 8.4.2) or add one (Section 8.4.3).

NOTE: *When you open a console, a security warning displays. By loading the certificate authority (Section 8.4.1), you can limit this warning to once.*

Viewing a Console's Activity

Click the monitor icon on the Show Consoles screen (to the left of the console name) to display the terminal emulator window for the console. The monitor icon looks like this: 

Viewing a Console's Configuration

Click the console name link on the Show Consoles screen to display the *console_name* Configuration screen.

8.4.1 Loading Certificate Authority

The Java applet used in ConsoleWorks warns of a potential security violation on the SMC PC. By loading the certificate authority, which is on the C drive with the application, you agree that content from TECSys Development, Inc. can be trusted.

Privileges required: Admin - none; Console - none

Figure 8-6 Security Warning



When you open a console, a security warning displays (Figure 8–6). To prevent repeated display of this warning, load the TDI security certificate.

1. In the left navigation panel of any ConsoleWorks screen, select Download.
2. From the selection links at the bottom of the left navigation panel, select TDI Certificate. The File Download dialog box displays (Figure 8–7).
3. Select the option button labeled *Open this file from its current location* and click OK.

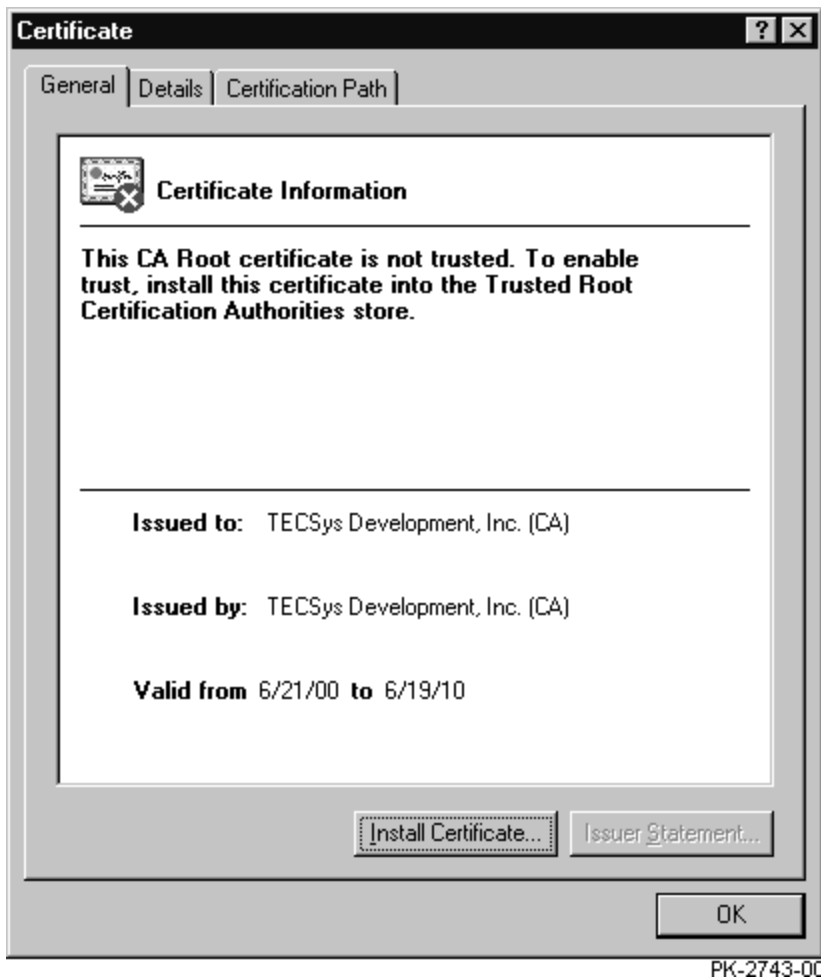
Continued on page 8-13

Figure 8-7 File Download Dialog Box



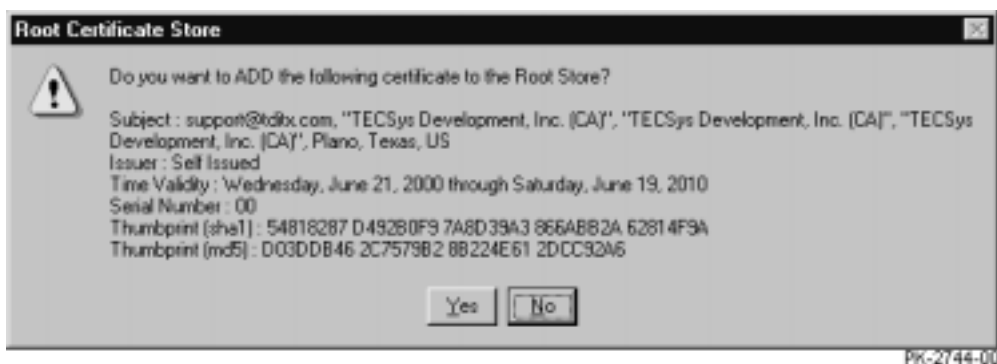
PK-2742-00

Figure 8-8 TDI Certificate



4. The certificate displays (Figure 8–8). Click Install Certificate....
5. The Certificate Manager Import Wizard displays. Follow the instructions in the wizard and accept the defaults. At the end click Finish.
6. The Root Certificate Store window displays (Figure 8–9). Click Yes.
7. The certificate displays again. Click OK.

Figure 8-9 Root Certificate Store Window

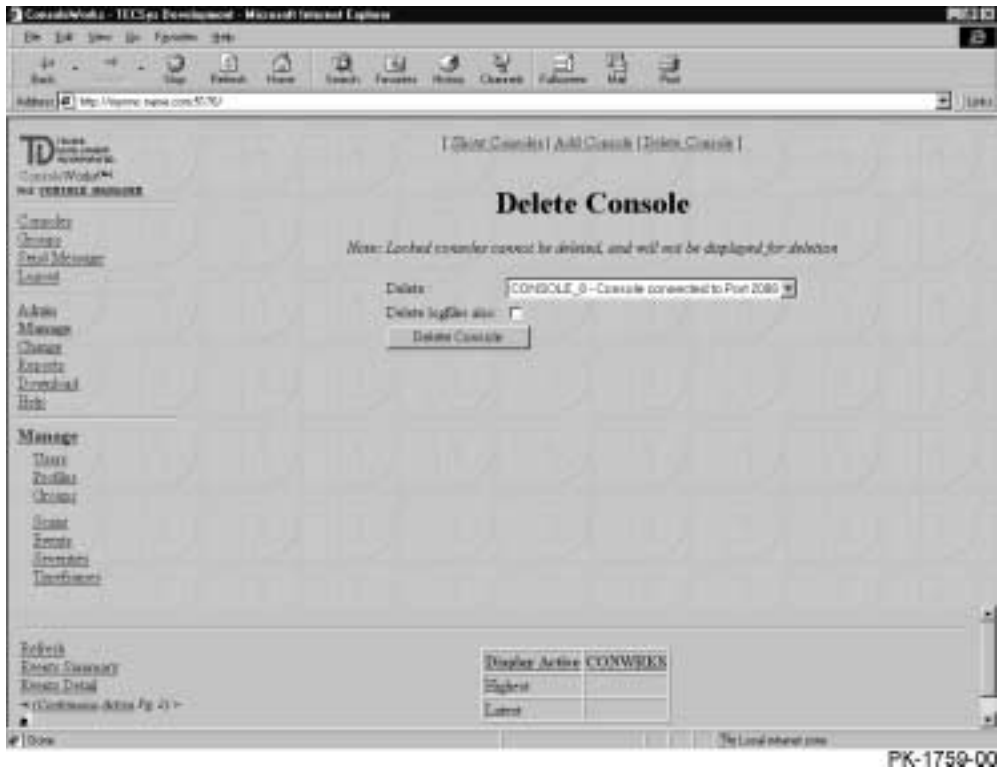


8.4.2 Deleting a Console

Select **Consoles** in the left navigation panel, then **Delete Console** at the top of the screen.

Privileges required: Admin - R W C; Console - none

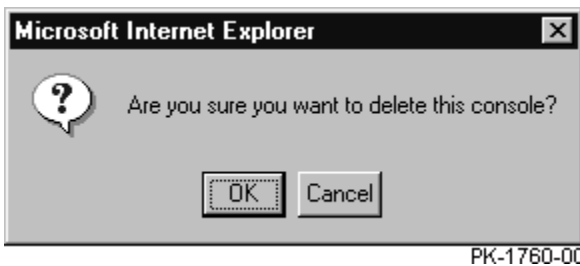
Figure 8-10 Delete Console Screen



NOTE: *Be sure you want to delete the console, since you cannot undo this operation. If you accidentally delete a console, use the Add Console function (Section 8.4.3) to reconfigure it.*

1. In the left navigation panel select Consoles. The Show Consoles screen displays.
2. At the top of the Show Consoles screen select Delete Console. The Delete Console screen displays (Figure 8–10).
3. From the Delete dropdown menu select the console to be deleted.
4. Determine if the log files for the console will be deleted. To delete them, select the checkbox labeled *Delete logfiles also*.
5. Click the Delete Console button. A verification message displays (Figure 8–11).
6. Click OK to delete the console. The Show Consoles screen displays; the deleted console is no longer listed.

Figure 8-11 Delete Console Verification Message

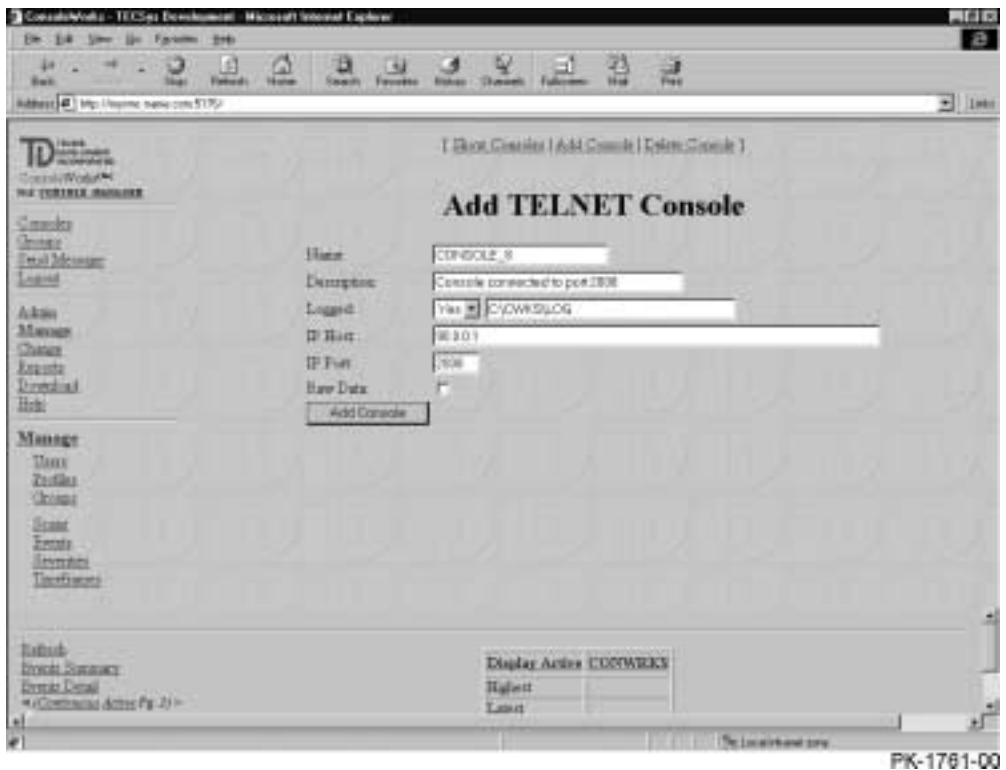


8.4.3 Adding a Console

Select **Consoles** in the left navigation panel, then **Add Console** at the top of the screen. The type is **Telnet**. Do not attempt to add a console if eight consoles already exist.

Privileges required: Admin - R W C; Console - none

Figure 8-12 Add Telnet Console Screen



1. In the left navigation panel select Consoles. The Show Consoles screen displays.

NOTE: *The maximum number of consoles supported by this version of ConsoleWorks is eight. If the Show Consoles screen lists eight consoles (not including the ConsoleWorks internal console, CONWRKS), do not attempt to add a ninth. Instead, you must delete a console before adding another.*

2. At the top of the Show Consoles screen select Add Console. The Add Console screen displays.
3. From the Type dropdown menu select Telnet. Click the Add Console button. The Add Telnet Console screen displays (Figure 8–12).
4. Enter the information requested for the console:
 - a. Enter a name and a description for the console. The console name must be unique.
 - b. Select Yes in the Logged list box. In the block to the right of the list box enter **D:\Cwks\Log**.
 - c. In the IP Host block enter **90.0.0.1**.
 - d. In the IP Port block enter a number between 2001 and 2008; the last digit is the terminal server port to which the console is attached. This number must be unique for each console.
 - e. Do not select the Raw Data checkbox.

Continued on page 8-19

Figure 8-13 *console_name* Configuration Screen

ConsoleManager - TCCSys Development - Microsoft Internet Explorer

Address: http://ipaddr:8080/5170/

CONSOLE_8 - [Edit Console] [Add Console] [Delete Console]

CONSOLE_8 - [Config] [Stats] [Logs] [Events] [Users] [Monitored Events] [Connect] [Monitor]

CONSOLE_8 - Configuration

Existing Console

Name: CONSOLE_8

Description: [Console connected to port 0x00]

Logger: [yes] [DOWNLOAD]

Type: TELNET

IP Host: 00.00.00

IP Port: 2008

Raw Data: No

Style: NORMAL

Information URL: []

(/W symbols will link to this URL) ☐ Open in new window

Managed System Information

Name: []

Location: []

Address: []

Contact Person: []

Contact Phone: []

Serial Number: []

Service Contract: []

Profile Access	READ	ACK	WRITE	CONTROL
CONSOLE MANAGER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DEFAULT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Special Chars Protected Strip

Break: ☐ ☐

PK-1762-00

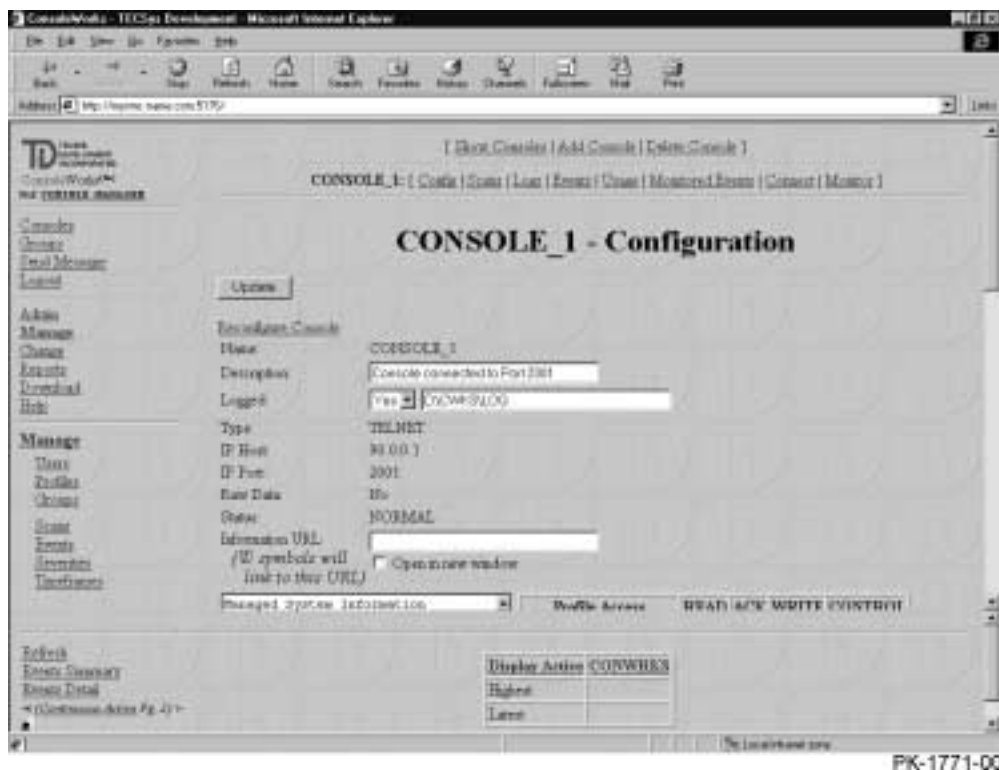
5. Click the Add Console button. The *console_name* Configuration screen displays (Figure 8–13).
6. Enter the profile access information at the bottom of the main data panel. Click the Update button.
7. At the top of the screen select Connect. A window displays showing console line activity. Press Enter to validate the connection. The connection is working if the SCM, SRM, or operating system prompt displays.

8.4.4 Renaming a Console

ConsoleWorks does not allow direct renaming of a console. To change a name, delete the console and add a new one with the preferred name.

Privileges required: Admin - R W C; Console - none

Figure 8-14 *console_name* Configuration Screen



The SMC is configured with eight default consoles, CONSOLE_1 through CONSOLE_8, which have the attributes needed by this system. Since ConsoleWorks does not allow direct renaming of a console, to change a name, you must delete the console and add a new one with the name you choose.

NOTE: *If the Show Consoles screen lists eight consoles (not including the ConsoleWorks internal console, CONWRKS), be sure to delete the console before adding a new one.*

1. Determine the console's properties.
 - a. In the left navigation panel select Consoles. The Show Consoles screen displays.
 - b. Select the console you want to rename from the list in the main data panel. The *console_name* Configuration screen displays (Figure 8-14).
 - c. Note the properties of this console, including the IP host and IP port numbers.
2. Delete the console (see Section 8.4.2).
3. Create a new console with the selected name (see Section 8.4.3).

NOTE: *The console name is included in the name of the log files for that console. Log files may have been generated for the console prior to the renaming. These file names will not change; that is, the old console name will remain in the name of the log files.*

8.5 Managing Events and Actions

An event is a text string in the input or output of a console's SCM, SRM, or operating system instance for which ConsoleWorks monitors. Based on the event, ConsoleWorks can trigger an action. Each event is associated with one or more scans, or collection of events. A scan, in turn, is associated with one or more consoles.

Figure 8-15 Show Events Screen

The screenshot shows the 'Show Event' screen in the ConsoleWorks application. The main content area displays a table of events. The table has four columns: Prio, Event, Description, and Severity. The events listed are as follows:

Prio	Event	Description	Severity
99	CONSOLE-AUTHFAIL	Authentication failure occurred	INFO
99	CONSOLE-BROADCAST	End of day closing has occurred	INFORMATIONAL
99	CONSOLE-EVENTMSG	ConsoleWorks events were modified	INFORMATIONAL
99	CONSOLE-WRITEERRMSG	Encountered writing to log file for console	INFORMATIONAL
50	GE AIR MOVING FAILURE	Air mover failure from a PSM	CRITICAL
50	GE HL OVERTEMP	Overtemp failure from an IFM	CRITICAL
50	GE PCM/IRM SYSTEMVOLT	PCM/IRM Systemvoltage	CRITICAL
50	GE PWR FAIL	Vital power failure from an IFM	CRITICAL
50	GE QIR OVERTEMP FAILURE	Overtemp failure from a PSM	CRITICAL
50	GE SYSTEM FAIL	Clock failure from an IFM	CRITICAL
50	GE VITAL POWER FAILURE	Vital power failure from a PSM	CRITICAL

Below the table, there are links for [Previous] and [Next]. At the bottom, there is a section for 'Filtered Active' events, showing 'CONSOLE-AUTHFAIL' as the highest and lowest event.

An event is a text string in the input or output of a serial port for which ConsoleWorks tests. The string can be to or from the SCM, SRM, or operating system. A number of events are supplied by ConsoleWorks and by Compaq; the user can create others (Section 8.5.1). Compaq supplies a number of events that are specific to the GS80/160/320 system (Section 8.5.2).

An event can trigger an action. Three actions are available: acknowledge (and optionally purge) the event, send mail to a designated recipient, and broadcast a message. In order for an action to occur, the user must enable it for the event (Section 8.5.3).

An event must be part of a scan, which is a collection of events that is associated with a console. The Compaq-supplied events are all included in one scan; other scans can be added (Section 8.5.4). In addition, scans can be imported to ConsoleWorks from other console management software. See the *ConsoleWorks Administration/User Guide* for information about importing scans.

Every time ConsoleWorks starts, it validates all outstanding events (events that have not been acknowledged). This can result in a long startup if unacknowledged events are allowed to accumulate. You can acknowledge and, optionally, purge selected events or a page of events for a specified console (8.5.5). Or you can expunge (acknowledge and purge) all events of a specified priority or lower for one or more consoles (Section 8.5.6). Alternatively, you can have ConsoleWorks automatically acknowledge (or acknowledge and purge) selected events for a specified console by using an action (Section 8.5.3).

8.5.1 Adding an Event

Select **Manage | Events** in the left navigation panel, then **Add Event** at the top of the screen.

Privileges required: Admin - R W C; Console - none

Figure 8-16 Add Event Screen

TD
Tactical Decision
Support Console
Not TETHERED MANAGER

1. Home 2. Events 3. Add Event 4. Delete Event

Add Event

Event:

Description:

Pattern: Wild ☐ Case insensitive ☐

Priority: (Highest priority=0, Lowest priority=999)

Severity:

Display Level: Above ☐ Below ☐

Display Active	CONVRES
Display	
Event	

PK-1763-00

1. In the left navigation panel select Manage. From the selection links select Events. The Show Event screen displays.
2. At the top of the Show Event screen select Add Event. The Add Event screen displays (Figure 8–16).
3. Enter the information for the event:
 - a. **Event** – Name of the event, limited to 61 characters. The name specified in this field is used in the list on the Show Event screen.
 - b. **Description** – Description of the event, maximum 127 characters.
 - c. **Pattern** – The text string for which ConsoleWorks tests. This field is limited to 255 characters. Wildcards are allowed: a percent sign (%) is a single-character wildcard; an asterisk (*) is multiple characters. If you use wildcards, be sure to check the Wild checkbox.
 - d. **Wild** – Check this box to indicate that the pattern field contains one or more wildcard characters.
 - e. **Case-insensitive** – Check this box to disable case sensitivity.
 - f. **Priority** – The range is 1 (highest) to 999 (lowest). This is used by ConsoleWorks to sort events.
 - g. **Severity** – The choices in this drop-down menu are critical, informational, major, minor, and warning. The severity is used by ConsoleWorks to sort events.
 - h. **Display lines above** and **Display lines below** – Provides context for the string; maximum of 25 lines above and below the matched string, for a total of 51 lines.
4. Click the Add Event button.

NOTE: *When a text string matches, ConsoleWorks triggers an event (such as sending mail) only when a carriage return is received from the console. If lines below the string are displayed, the event activates only after the carriage return from the last line is received.*

8.5.2 Importing and Using Compaq-Supplied Events

The Compaq-supplied events and script send mail to a designated individual if any of seven conditions occurs in the GS80/160/320 system. Some configuration is required to enable these actions.

Table 8-1 Compaq-Supplied Events

Event	Description
GS_AIR_MOVER_FAILURE	Air mover failure in a QBB
GS_HS_OVERTEMP	Overtemperature condition in the hierarchical switch housing
GS_PCI_PBM_SYSEVENT	System event in a PCI box
GS_PWR_FAIL	Vital power failure in the hierarchical switch housing
GS_QBB_OVERTEMP_FAILURE	Overtemperature condition in a QBB
GS_SYSCLK_FAIL	Clock failure in the hierarchical switch housing
GS_VITAL_POWER_FAILURE	Vital power failure in a QBB

The Compaq-supplied events warn of a number of AlphaServer conditions that require attention (Table 8–1). These events must be brought into ConsoleWorks before they can be used. Unless ConsoleWorks is re-installed, this procedure is done only once.

To import the Compaq-supplied events into ConsoleWorks, do the following:

1. Open a Command window: From the Start button, select Programs | Command Prompt.
2. In the Command window enter the following (shown here in bold); press the Enter key at the end of each line:

```
C:\> cd cwks
```

```
C:\> import_pcm c:\cwks\port\scm.port
```

3. Restart the SMC system.

To use the Compaq-supplied events, do the following:

1. If the ConsoleWorks script (C:\Cwks\Actions\Event\Mail.pl) has not been modified to include the name of your mail server, follow the instructions in Section 5.3.
2. Follow the instructions in Section 8.5.3 to enable MAIL.BAT on all consoles for each of the seven events that begins with the string “GS–”.

8.5.3 Enabling an Action

Each event can have a number of associated actions.

Privileges required: Admin - R W C; Console - none

Figure 8-17 Event *event_name* Screen

The screenshot shows a web-based interface for managing events. The main title is "Event CONWRKS-LOSTCOMM". Below the title, there are fields for "Event" (CONWRKS-LOSTCOMM) and "Description" (Lost communication with console). There are buttons for "Update Event" and "Add Event". Below these, there are sections for "Actions" and "Display Action". The "Actions" section includes fields for "Pattern" (CONWRKS-LOSTCOMM), "Mask" (Case-sensitive), "Priority" (1), "Subscription" (Highest priority), "Severity" (MAJOR), and "Display List" (Above 0, Below 0). The "Display Action" section shows a table with columns "Display Action" and "CONWRKS". The table has three rows: "High", "Low", and "Late". There is also a "Member of Team" section with a button "OR SCM SCAN".

Display Action	CONWRKS
High	
Low	
Late	

PK-2701-01

1. In the left navigation panel select Manage. From the selection links select Events. The Show Events screen displays.
2. Select the event link from the list. The Event *event_name* screen displays (Figure 8-17).
3. Select the Automatic Actions link (above the Pattern box). The Event *event_name* Actions screen displays (Figure 8-18).
4. Enable or disable event throttling. If throttling is enabled, the event triggers the action once, but does not activate it again until the event is acknowledged. If throttling is disabled, the event triggers the action every time it occurs.
5. Highlight the console or consoles for which the event will trigger an action.

Continued on page 8-31

Figure 8-18 Event *event_name* Actions Screen

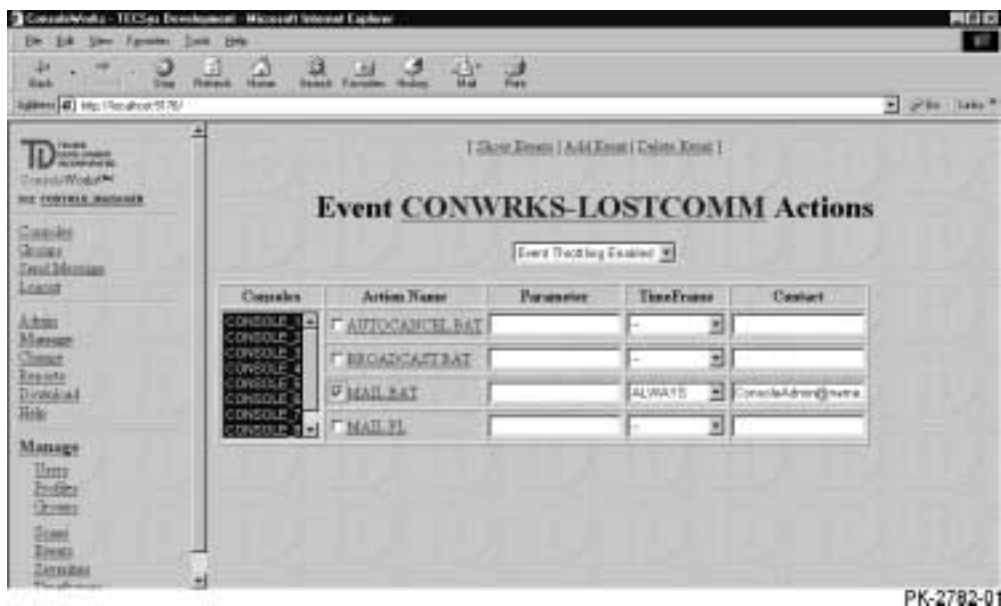
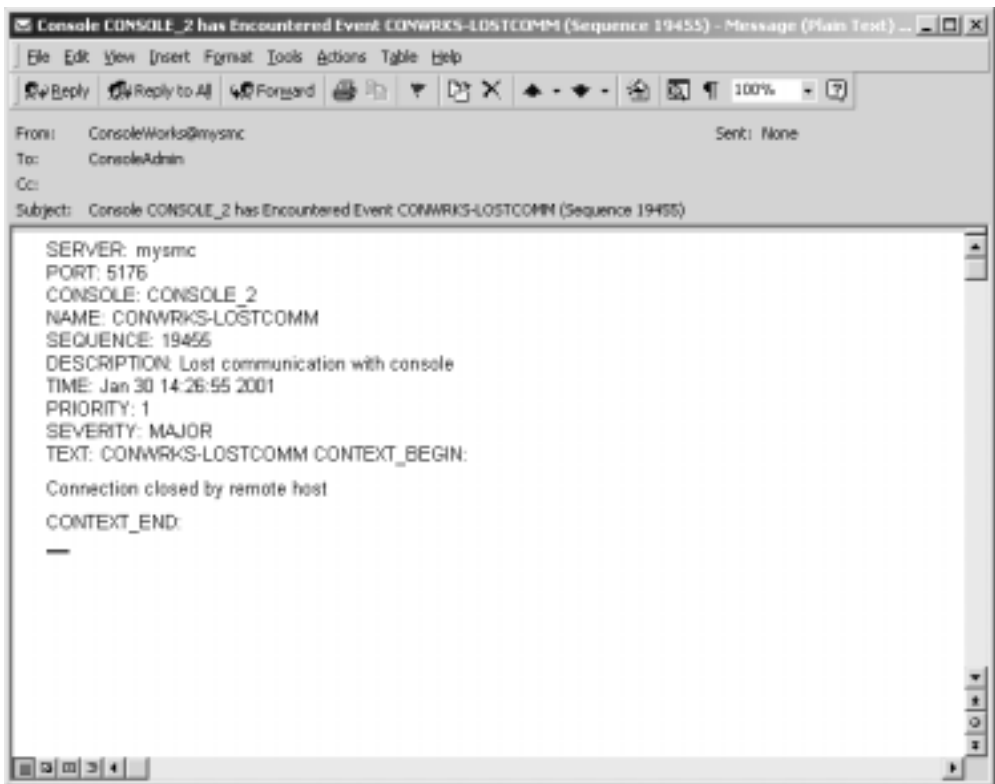


Figure 8-19 Mail from ConsoleWorks



PRC-2783-01

6. Click the checkbox(es) of the action or actions that you want to have triggered by the event. Four items are listed; they represent the four files in the folder C:\Cwks\Actions\Event. Three of them represent valid actions:
 - AUTOCANCEL.BAT – Acknowledge an event immediately after it occurs and, optionally, purge it.
 - BROADCAST.BAT – Broadcast a message to the indicated contact.
 - MAIL.BAT – Send mail to the indicated contact.

The fourth item, MAIL.PL, is used by MAIL.BAT. Selecting it has no effect.

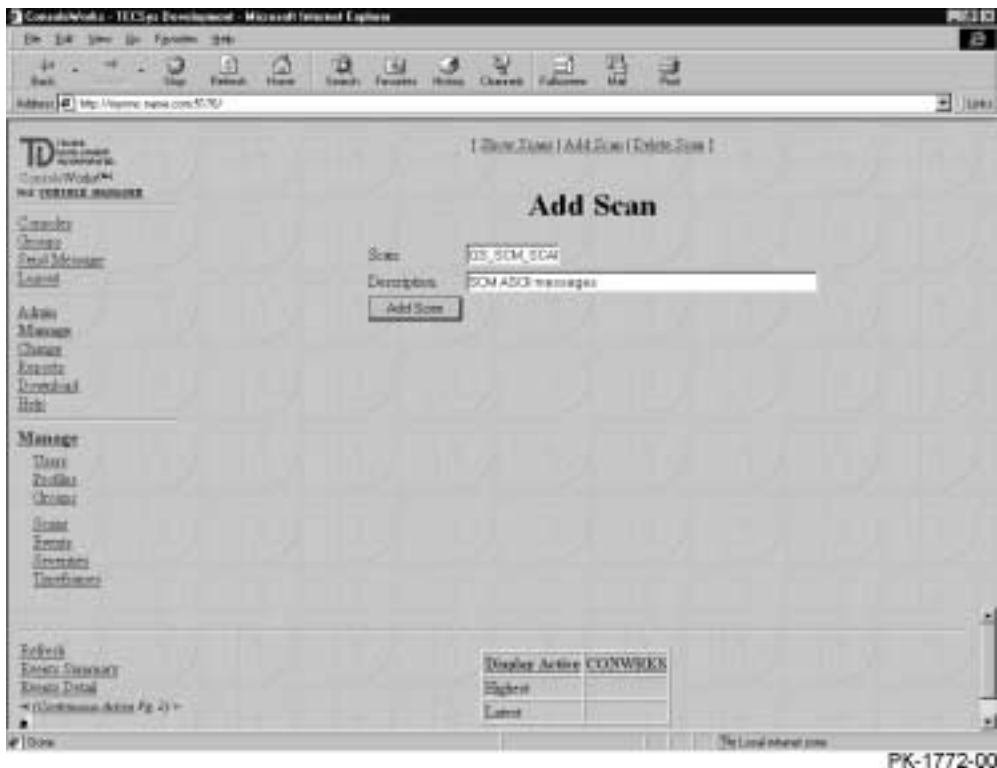
7. Supply a timeframe from the drop-down menu for the action(s) selected.
8. If you selected BROADCAST.BAT or MAIL.BAT, supply a contact.
9. If you selected AUTOCANCEL.BAT and want ConsoleWorks to purge all occurrences of the event, do the following:
 - a. Open Windows Explorer: From the Start button, select Programs | Windows NT Explorer.
 - b. Open the folder C:\Cwks\Actions\Event.
 - c. Right-click on the file AUTOCANCEL.BAT and select Properties in the pop-up menu. The AUTOCANCEL.BAT Properties window displays.
 - d. If the Read-only attribute is checked, click to clear the checkbox. Click OK.
 - e. Right-click on the file again in Windows Explorer and select Edit. The file displays in Notepad.
 - f. Scroll to the end of the file. Remove the string "Rem " from the beginning of the line before the last line.
 - g. From the File menu select Save, then select Exit.

8.5.4 Adding a Scan

Select Manage | Scans in the left navigation panel, then Add Scan at the top of the screen.

Privileges required: Admin - R W C; Console - none

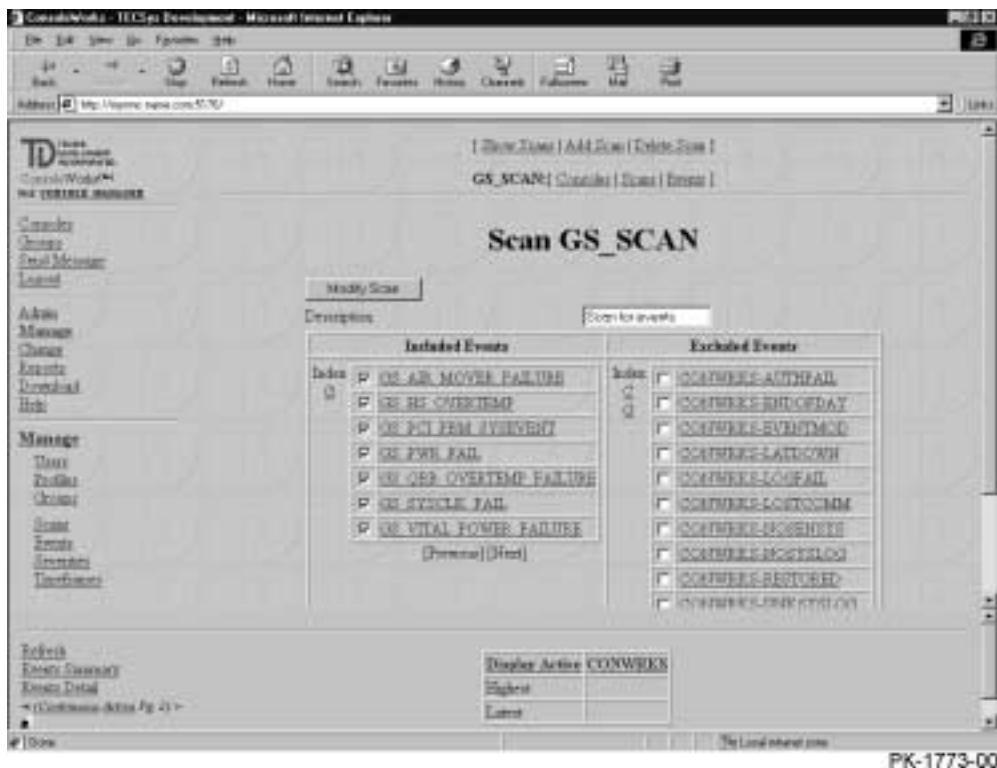
Figure 8-20 Add Scan Screen



1. In the left navigation panel select Manage. From the selection links select Scans. The Show Scans screen displays.
2. At the top of the Show Scan screen select Add Scan. The Add Scan screen displays (Figure 8-20).

3. Enter the information for the scan:
 - a. **Scan** – Name of the scan, limited to 30 characters.
 - b. **Description** – Description of the event, maximum 126 characters.
4. Click the Add Scan button. The Scan *scan_name* screen displays.
5. At the top of the screen select Events. A list of events displays; all are shown as excluded.
6. In the Excluded Events column select the events to include in this scan. Click the Update Scan button. The screen refreshes, and the events you selected are now in the Included Events column (Figure 8–21).

Figure 8-21 Scan *scan_name* Screen



8.5.5 Acknowledging and Purging Events

Click Events Detail. Select individual events or the Select All link. Click Acknowledge Selected Events, then Purge Acknowledged Events.

Privileges required:

Acknowledge: Admin - none; Console - R A

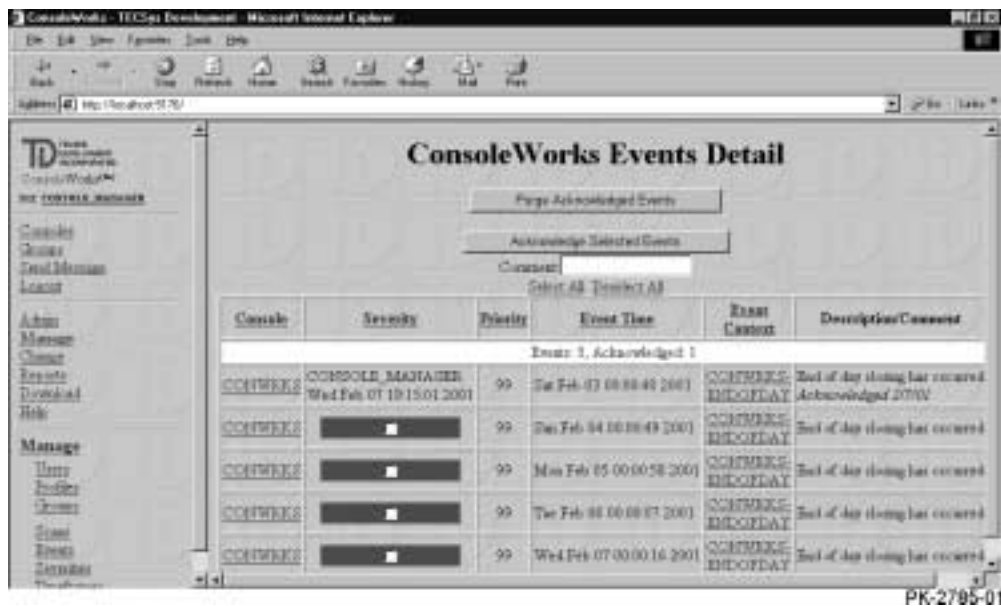
Delete: Admin - none; Console - R A W C

Figure 8-22 ConsoleWorks Events Detail Screen



1. Display the events. You can display the events for one console only or for all consoles.
 - **One console:** From the left navigation panel select Consoles. The Show Consoles screen displays. Select the console for which you want to acknowledge events from the list. The *console_name* Configuration screen displays. At the top of the screen select the Events link. The *console_name* Events screen displays.

- **All consoles:** From the lower navigation panel select Events Detail. The ConsoleWorks Events Detail screen displays (Figure 8–22).
2. Select the event or events to acknowledge.
 - **Individual events:** Each occurrence of an event is listed on a line. Click in the checkbox on that line to select the event.
 - **All events on the page:** Click the link Select All. This selects all events on the page. Click this link on other pages to select all events.
3. Optionally, enter a comment in the Comment box.
4. Click the button labeled Acknowledge Selected Events. The screen redisplay with the name of the user who acknowledged the event and the date in place of the checkbox and the comment, if included, in the description column (Figure 8–23).
5. To delete the acknowledged events, click the button labeled Purge Acknowledged Events. The screen redisplay without the event.

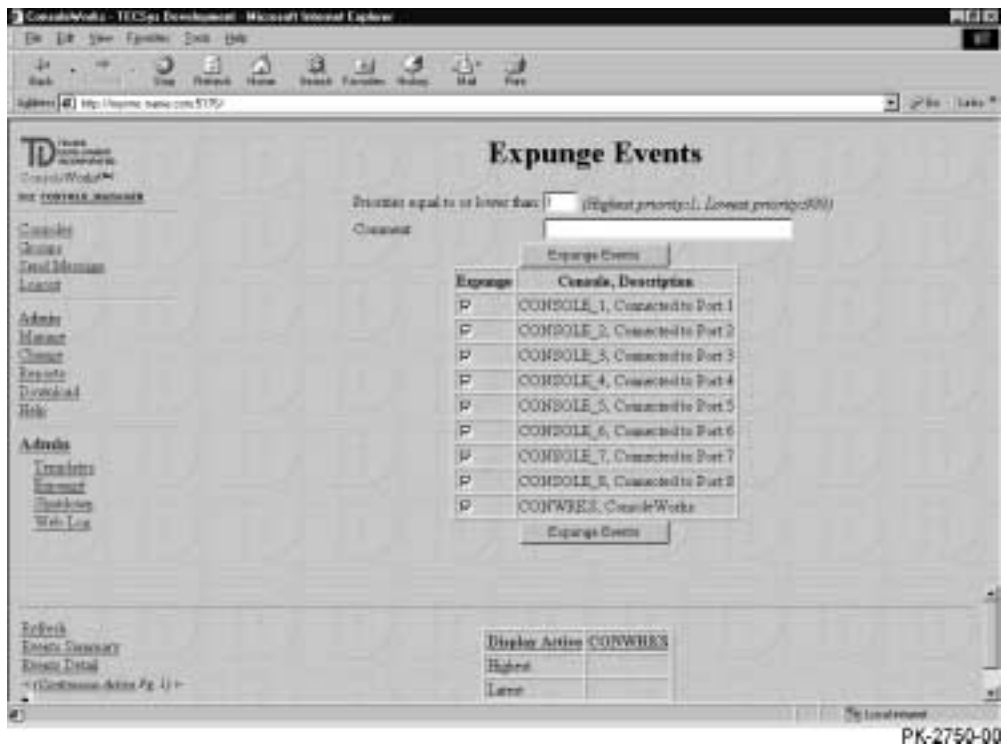


8.5.6 Expunging Events

Expunging acknowledges and deletes all events of a specified priority and lower from a console. Select Admin | Expunge. Select the console or consoles from which events are to be deleted and click Expunge Events.

Privileges required: Admin - R W C; Console - none

Figure 8-24 Expunge Events Screen



Expunging acknowledges and deletes all events of a specified priority and lower from a console in one operation.

1. In the left navigation panel select Admin. From the selection links select Expunge. The Expunge Events screen displays (Figure 8-24).

2. In the box labeled Priorities equal to or lower than, select the highest priority of events to delete.
3. Click the checkbox of each console for which events will be deleted.
4. Click the Expunge Events button.
5. Wait for the message indicating the number of events that have been expunged (Figure 8–25).
6. Close the ConsoleWorks application.
7. Stop the ConsoleWorks services: From the Start menu select Settings | Control Panel. Double-click the Services icon. Highlight the ConsoleWorks LMF Server Service; click the Stop button. Repeat with ConsoleWorks Server Service. Close the Services window.
8. Open a Command window: From the Start menu select Programs | Command Prompt.
9. In the Command window enter the following (shown here in bold); press the Enter key at the end of each line:


```

C:\> cd cwks
C:\Cwks> exportdb file
C:\Cwks> importdb file
C:\Cwks> exit

```
10. Start the ConsoleWorks services. Follow the instructions in step 7, but click the Start button. Restart the ConsoleWorks application.

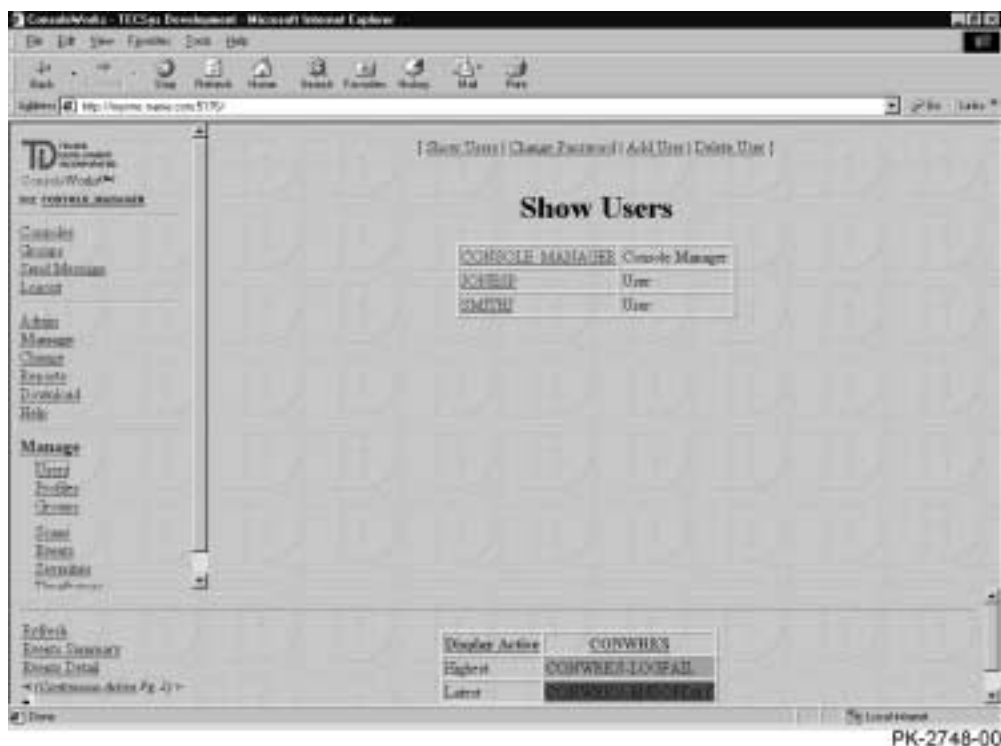
Figure 8-25 Expunge Completed Message



8.6 Managing Users

The SMC system administrator determines the consoles to which a user has access and the level of that access. The level of access is controlled by a profile; each user is associated with one or more profiles.

Figure 8-26 Show Users Screen



Users gain access to consoles through profiles. A profile specifies the privileges granted to any user who is listed in its Users Granted table. Each user has access to one or more profiles but can use only one profile at a time.

Profiles specify two types of privileges: Console and Admin (administrative). Console and Admin privileges are independent.

Console privileges are for managing consoles. These privileges identify the level of interaction a user can have with a console and are hierarchical. That is, the level of privilege increases from read to control, and a higher level implies all lower levels.

Console privileges are:

Read – The user has read-only access to a console. The user can monitor a console's traffic but cannot interact with the console.

Ack – The user can acknowledge a console's events.

Write – The user can interact with (write to) the console.

Control – The user can purge acknowledged events and can send protected characters to the console.

Admin privileges are for managing ConsoleWorks. These privileges are not hierarchical, but they increase in the capabilities they grant from Read to Delete.

Admin privileges are:

Read and Write – The user can display and organize information.

Control – The user has access to the Admin menu in the left navigation panel.

Delete – The user can perform a number of delete operations.

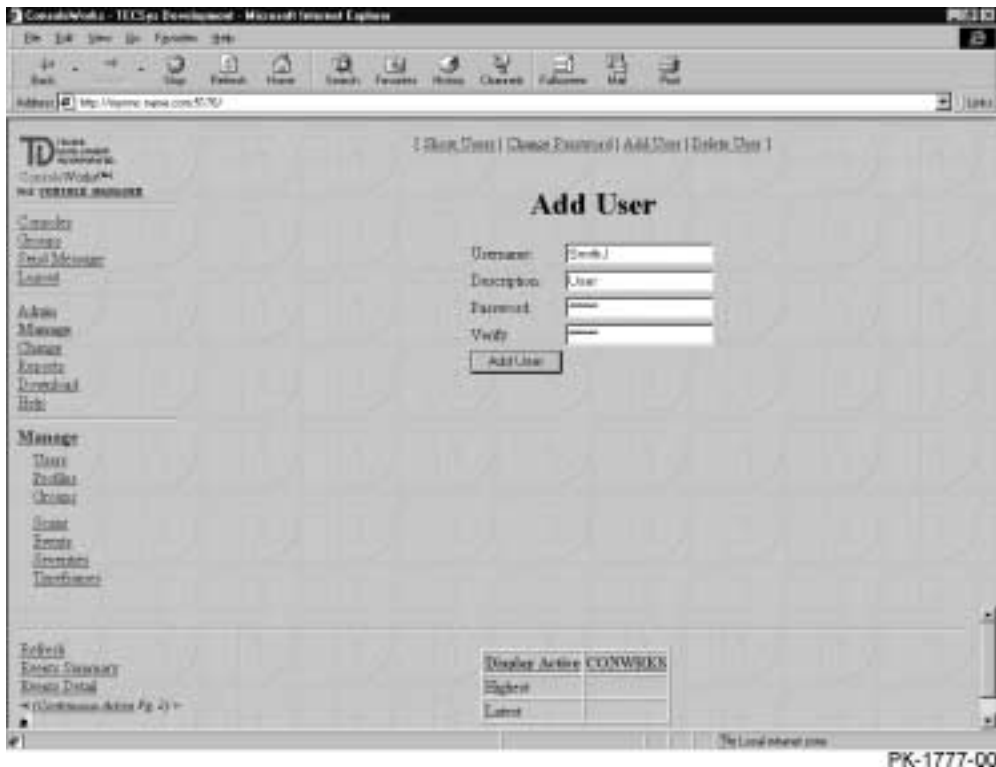
The Show Users screen (Figure 8–26) lists the users and the profiles to which they have access.

8.6.1 Adding a User

Select Manage | Users in the left panel, then Add User at the screen top.

Privileges required: Admin - R W C; Console - none

Figure 8-27 Add User Screen



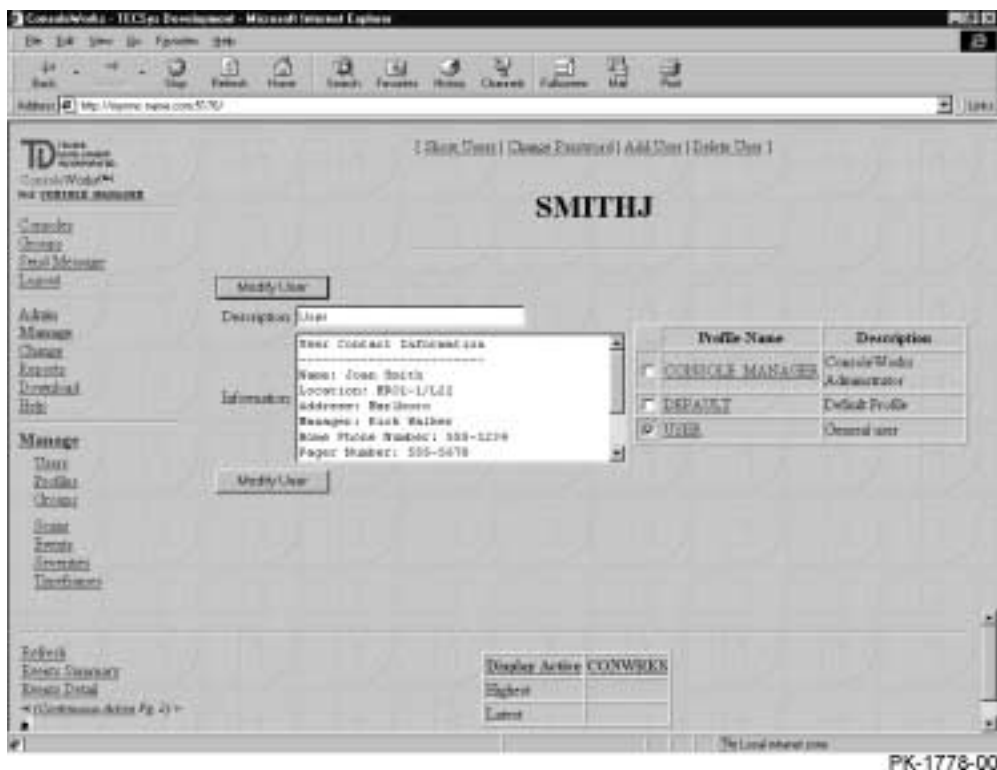
1. In the left navigation panel select Manage. From the selection links select Users. The Show Users screen displays.
2. At the top of the Show Users screen select Add User. The Add User screen displays (Figure 8–27).
3. Enter the information for the user:
 - a. **Username** – Must be unique. May not contain spaces; ConsoleWorks replaces any spaces with underscores.

- b. **Description** – For information only; not used elsewhere in ConsoleWorks.
 - c. **Password** – Must be at least six characters long.
 - d. **Verify** – Enter the password again. Verify must match Password.
4. Click the Add User button. The *user_name* screen displays (Figure 8–28).
 5. Enter the user contact information and select the profile for this user.

NOTE: *If you select more than one profile, the user is logged in with the one that has the least administrative privilege. The user can change the profile used after logging in by selecting Change /Profile.*

6. Click the Modify User button.

Figure 8-28 *user_name* Screen

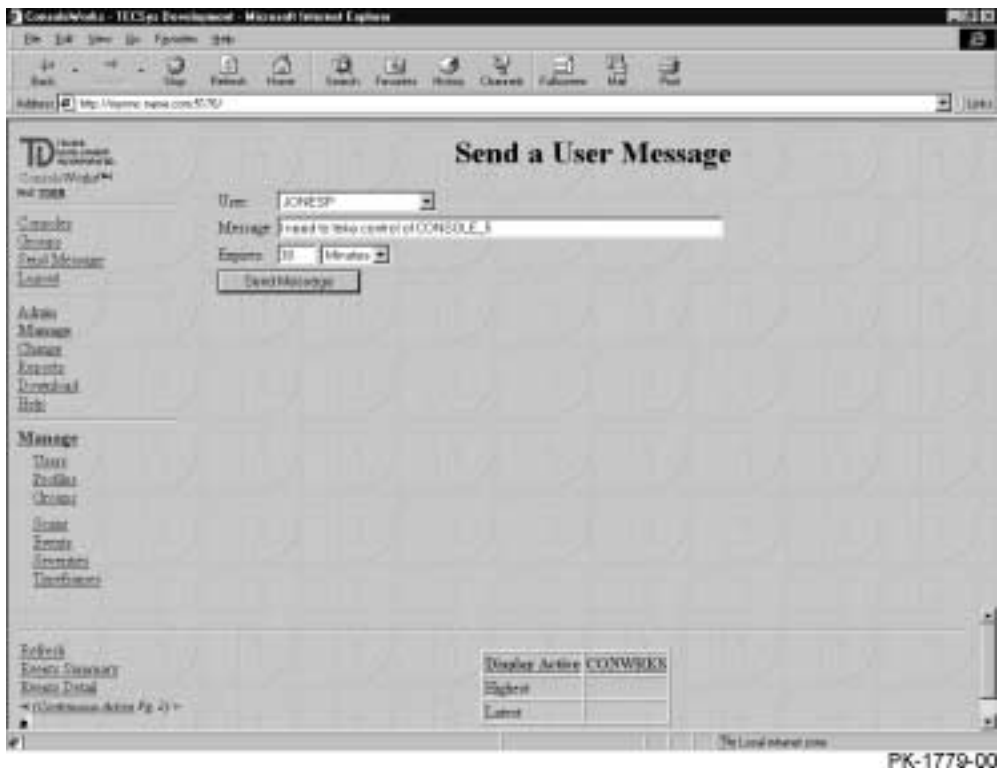


8.6.2 Communicating with Another User

To send a message, select Send Message in the left navigation panel. To read messages, click the mailbox icon in the bottom panel.

Privileges required: Admin - none; Console - none

Figure 8-29 Send a User Message Screen



Sending a Message

1. In the left navigation panel select Send Message. The Send a User Message screen displays (Figure 8-29).
2. Select the recipient from the Select User dropdown menu.

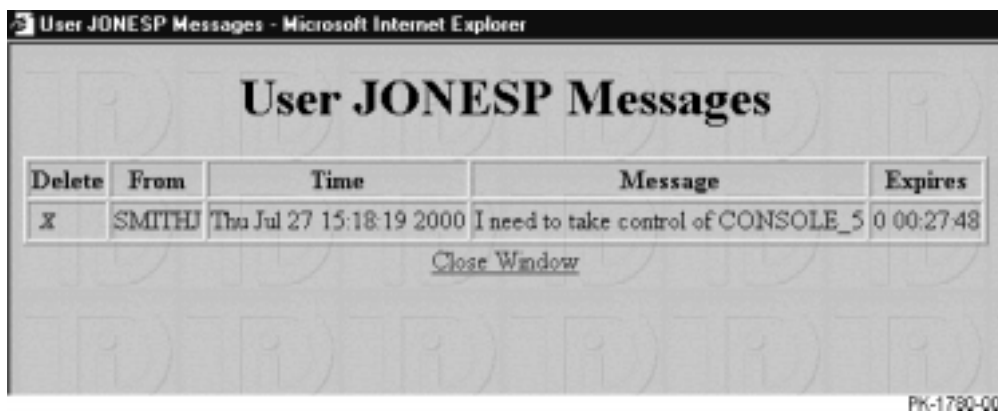
3. Enter the message in the Message text box. The maximum length is 255 characters.
4. Enter the timeout period in the Expires text box and select the units in the dropdown menu to the right of the text box. The default is 1 hour, the minimum 1 minute, and the maximum 9999 days. The message is deleted if the recipient does not read it before the timeout period expires.

Reading Messages

Message status is indicated by the icon in the lower left corner of the lower navigation panel. A plain mailbox icon (✉) indicates that the user has no new messages. An icon showing a mailbox with an envelope (✉) means that the user has messages.

1. Click on the icon to display a list of undeleted, unexpired messages. The User *user_name* Messages screen (Figure 8–30) displays in a separate browser window. The text of each message is displayed in a separate row along with the name of the sender, the time the message was sent, and the time and date it expires.
2. To delete a message, click the X in its row. The message is immediately deleted, without confirmation.

Figure 8-30 User *user_name* Messages Screen



8.6.3 Changing a User Password

Select Change | Password in the left navigation panel.

Privileges required: Admin - R W C (none for user's own) ; Console - none

Figure 8-31 Change Password Screen



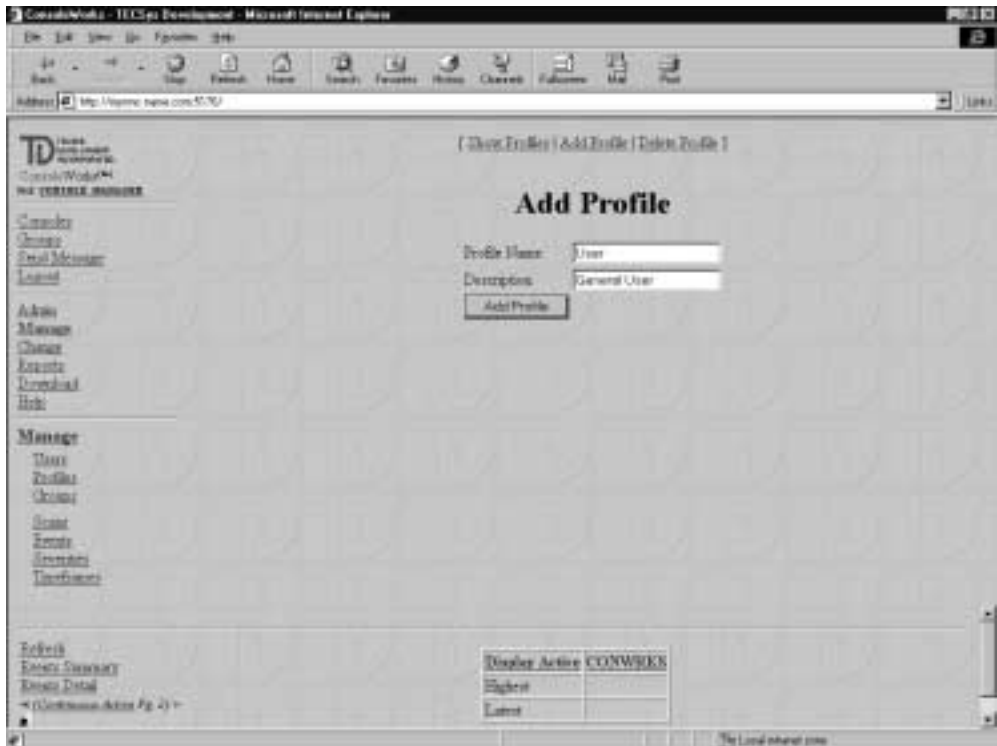
1. In the left navigation panel select Change. From the selection links select Password. The Change Password screen displays (Figure 8–31).
2. From the Change Password dropdown list select the user whose password is to change.

8.6.4 Adding a Profile

Select **Manage | Profiles** in the left navigation panel, then **Add Profile** at the top of the screen.

Privileges required: Admin - R W C; Console - none

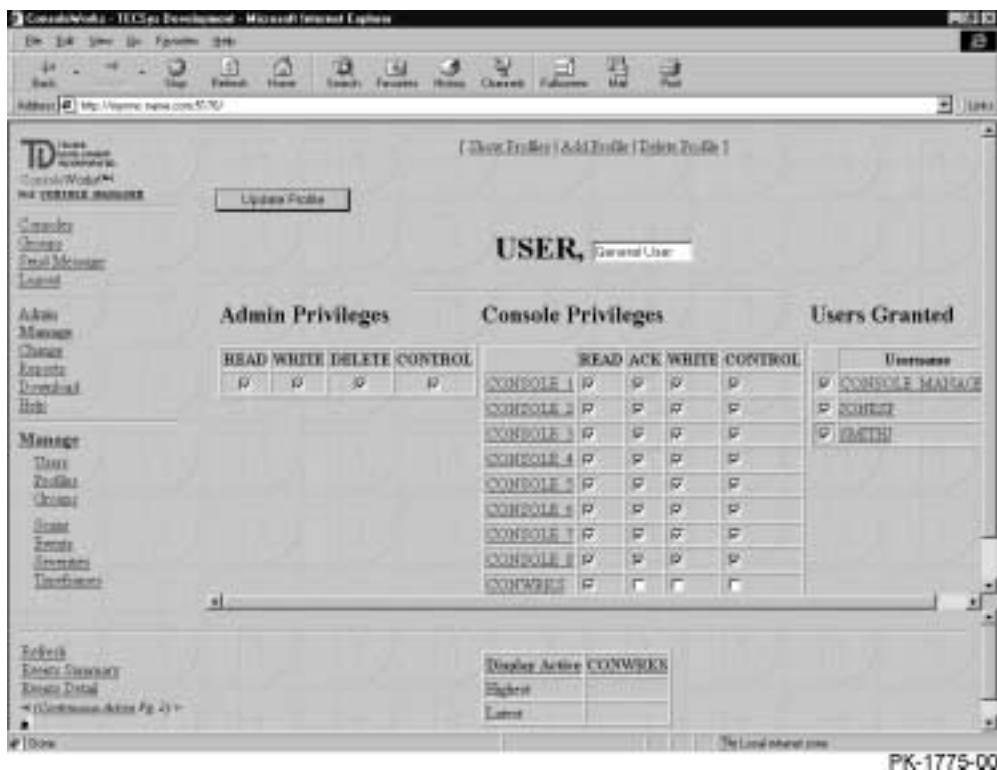
Figure 8-33 Add Profile Screen



PK-1774-00

1. In the left navigation panel select Manage. From the selection links select Profiles. The Show Profiles screen displays.
2. At the top of the Show Profiles screen select Add Profile. The Add Profile screen displays (Figure 8–33).
3. Enter the information for the profile:
 - a. **Profile Name** – Can be no longer than 30 characters.
 - b. **Description** – Maximum 62 characters.
4. Click the Add Profile button. The *profile_name* screen displays (Figure 8–34).
5. Select privileges for users who have this profile.
6. Click the Update Profile button.

Figure 8-34 *profile_name* Screen



8.6.5 Modifying a Profile

Select Manage | Profiles in the left navigation panel.

Privileges required: Admin - R W C; Console - none

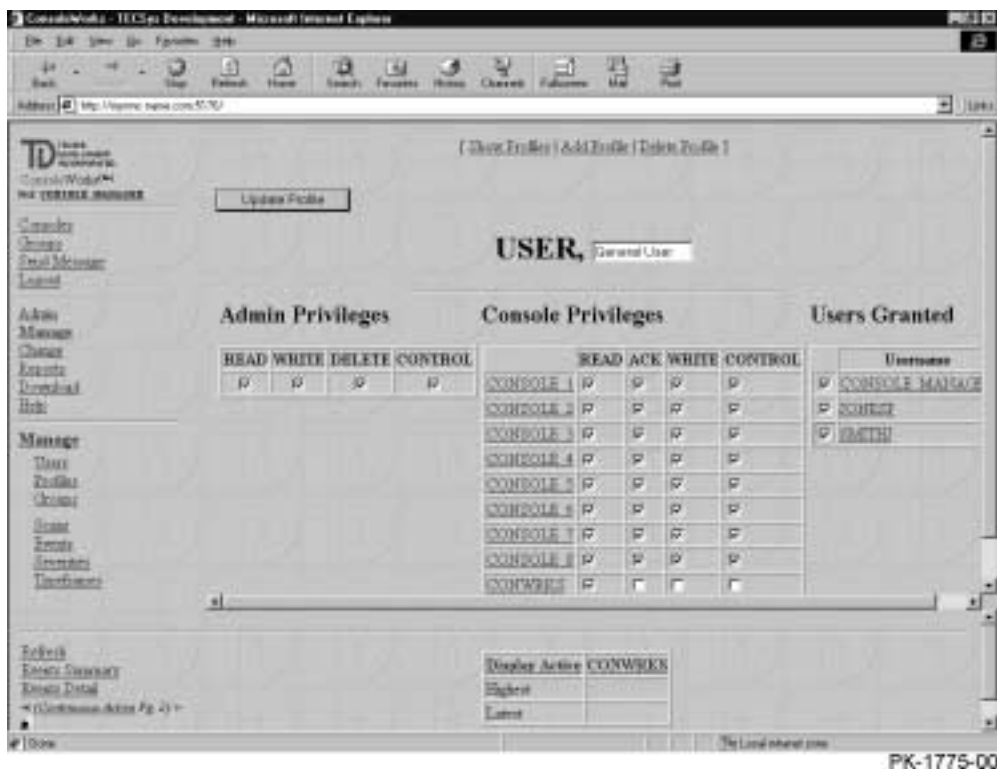
Figure 8-35 Show Profiles Screen



PK-1776-00

1. In the left navigation panel select Manage. From the selection links select Profiles. The Show Profiles screen displays (Figure 8–35).
2. Select the profile to modify from the list. The *profile_name* screen displays (Figure 8–36).
3. Make the changes to the profile. Click the Update Profile button.

Figure 8-36 *profile_name* Screen



ConsoleWorks creates log files for each console (CONSOLE_1 through CONSOLE_8 and CONWRKS). These logs are text files that can be viewed or deleted through ConsoleWorks or by accessing them in the directory.

ConsoleViewWin - [C:\Program Files\Trend Micro\HijackThis\HijackThis.exe]

File Edit View Options Tools Help

Back Forward Stop Refresh Home Search Favorites History Print Exit

Address http://www.trendmicro.com/hi770

TD
Trend Micro
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CONSOLE_4 | Console | Queue | Log | Timeline | Views | Messages | Events | Connect | Monitor

CONSOLE_4 Logfiles

Log File Name	Delete
Thu Jan 22 14:40:11 2009 (CSD)	<input type="checkbox"/>
Fri Jan 23 08:56:33 2009 (CSD)	<input type="checkbox"/>
Tue Jan 27 14:39:09 2009 (CSD)	<input type="checkbox"/>
Wed Jan 28 30:08:17 2009 (CSD)	<input type="checkbox"/>
Thu Jan 29 00:30:07 2009 (CSD)	<input type="checkbox"/>
Fri Jan 30 08:00:22 2009 (CSD)	<input type="checkbox"/>
Sat Jan 31 04:08:11 2009 (CSD)	<input type="checkbox"/>
Sun Jan 31 04:08:11 2009 (CSD)	<input type="checkbox"/>
Mon Jan 31 08:00:22 2009 (CSD)	<input type="checkbox"/>
Tue Jan 31 08:00:22 2009 (CSD)	<input type="checkbox"/>
Wed Jan 31 08:00:22 2009 (CSD)	<input type="checkbox"/>
Thu Jan 31 08:00:22 2009 (CSD)	<input type="checkbox"/>
Fri Jan 31 08:00:22 2009 (CSD)	<input type="checkbox"/>
Sat Jan 31 08:00:22 2009 (CSD)	<input type="checkbox"/>

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PK-1785-02

ConsoleWorks creates a new log file for each console (CONSOLE_1 through CONSOLE_8 and CONWRKS) every day at midnight. These log files are on the SMC hard drive in the directory D:\CWKS\LOG. The naming convention is *console_name.LOG_yyyy_mm_dd*. The logs for CONSOLE_1 through CONSOLE_8 show all activity on the console. The log for CONWRKS shows activity and events from all consoles.

Log files can quickly fill the disk if they are not managed. For that reason, it is a good idea to archive or delete these files often.

You can view a log file in ConsoleWorks (Section 8.7.1) or by opening it with Notepad. Similarly, you can delete a log file from ConsoleWorks (Section 8.7.2) or from Windows Explorer. To mail a log file, use Outlook Express (Section 8.7.3).

Select Consoles in the left navigation panel. Then select the console from the list. At the top of the screen select the Logs link and the log to view from the list.

Figure 8-38 Log File Screen



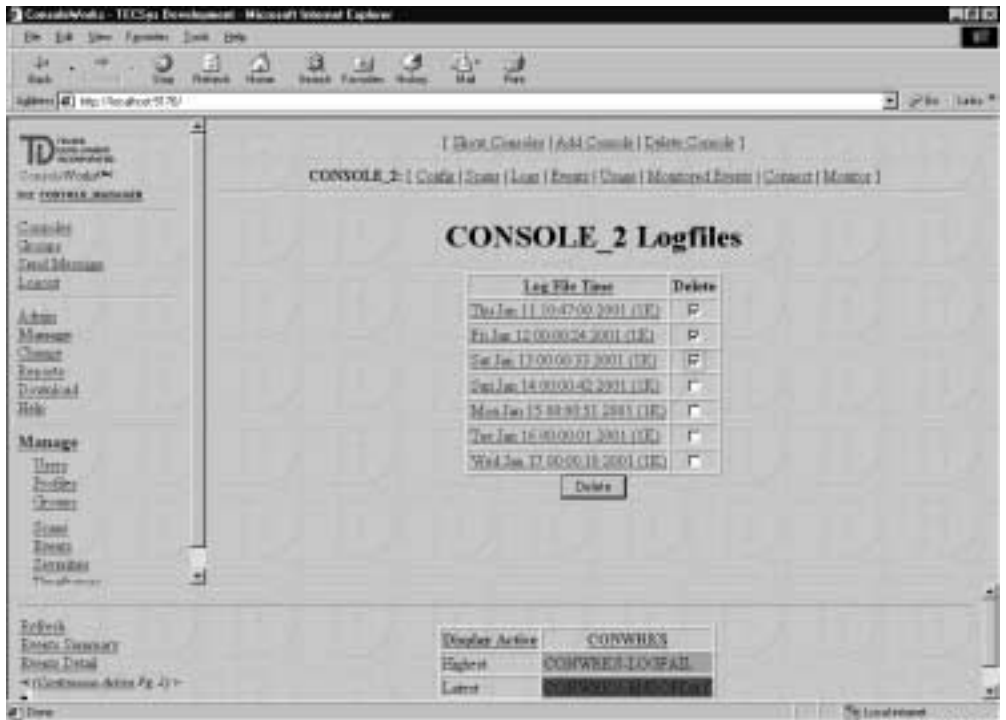
1. From the left navigation panel select Consoles. The Show Consoles screen displays.
2. Select the console from the list. The *console_name* Configuration screen displays.
3. At the top of the screen select Logs. The *console_name* Logfiles screen displays (Figure 8–37).
4. Select the log file from the list. The file displays (Figure 8–38).

8.7.2 Deleting Log Files

Select **Consoles** in the left navigation panel. Then select the console from the list. At the top of the screen select the **Logs** link

Privileges required: Admin - ; Console -

Figure 8-39 *console_name* Logfiles Screen



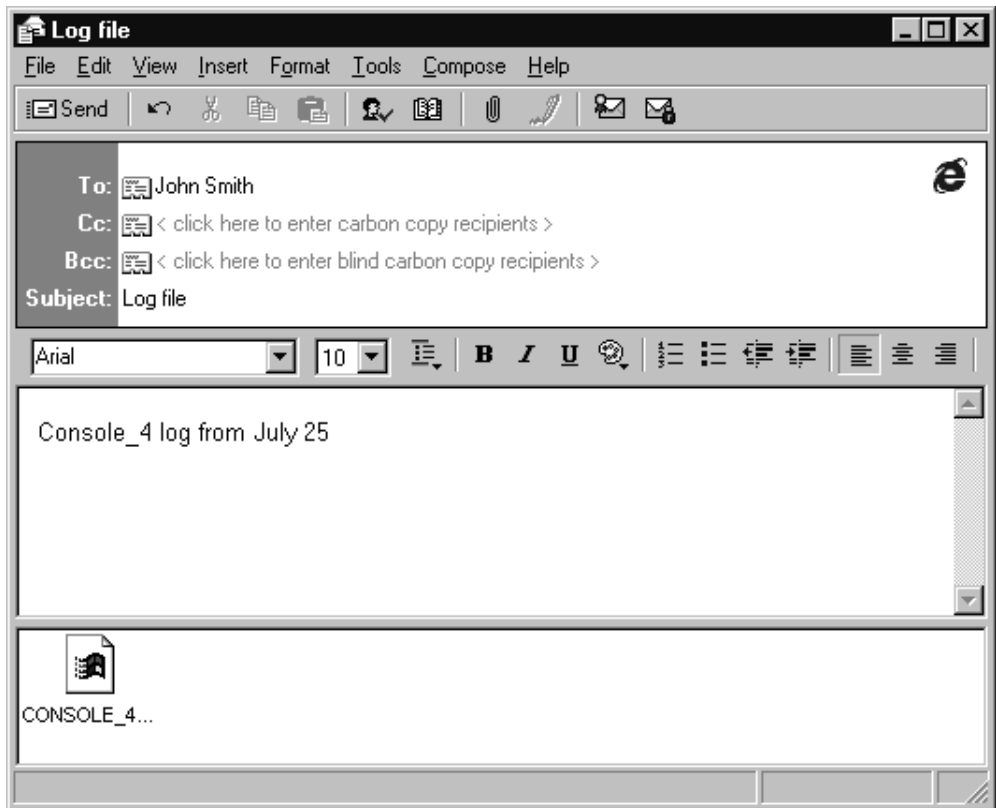
PK-2763-01

1. From the left navigation panel select Consoles. The Show Consoles screen displays.
2. Select the console from the list. The *console_name* Configuration screen displays.
3. At the top of the screen select Logs. The *console_name* Logfiles screen displays (Figure 8–39).
4. Click the checkboxes of the log files to delete and click the Delete button.

8.7.3 Mailing a Log File

Start Outlook Express, then include the log file as an attachment.

Figure 8-40 Outlook Express Message Window



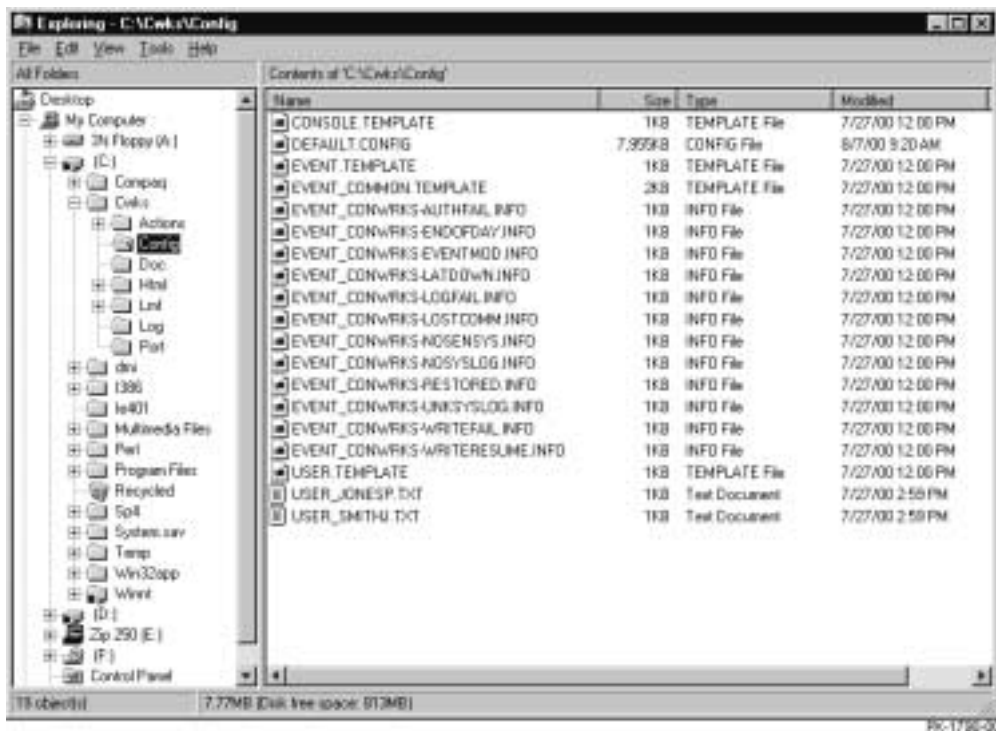
PK-2716-00

1. Double-click the Outlook Express icon on the SMC desktop. The Outlook Express Window displays.
2. From the Compose menu select New Message. The New Message window displays (Figure 8–40).
3. Enter recipients' names or addresses and the subject. The title bar text changes to the subject.
4. To include the log file as an attachment, from the Insert menu select File Attachment... or click the button with the paperclip icon. Select Browse... and switch to the D drive, CWKS folder (D:\CWKS) for a list of files.
5. Click the Send button to send the message.

8.8 Saving the Configuration

Once you have established the ConsoleWorks configuration, save it to a Zip or floppy disk, D drive, or a network drive so you can easily restore it if ConsoleWorks must be reinstalled. Shut down ConsoleWorks before saving the configuration.

Figure 8-41 Windows NT Explorer



You can save the configuration to a Zip disk or floppy disk, or to the D drive on the SMC or a network drive.

Saving the Configuration

1. If ConsoleWorks is running, shut it down.
2. From the Start menu select Programs | Windows NT Explorer.
3. In the Exploring window select C:\Cwks\Config (Figure 8–41).
4. From the Edit menu select Copy.
5. If you are saving the configuration to a Zip disk or a floppy disk, insert the disk in the drive.
6. In the Exploring window select the Zip, floppy, D, or network drive and the location to which you want to save.
7. From the Edit menu select Paste.
8. If you created any actions, repeat steps 3 through 7 for the Actions folder.
9. If you saved to a disk, remove the disk from the drive and label it "ConsoleWorks Configuration."

Restoring the Configuration

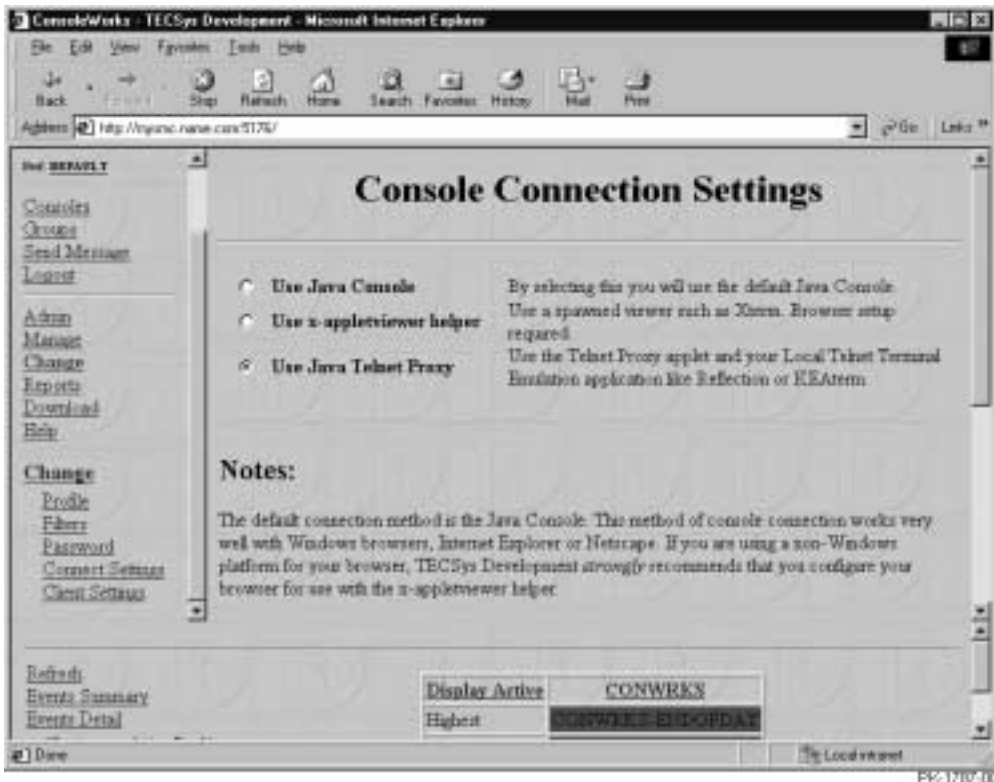
1. If you saved to a disk, insert the ConsoleWorks Configuration disk in the Zip drive or floppy drive.
2. From the Start menu select Programs | Windows NT Explorer.
3. In the Exploring window select C:\Cwks\Config. Delete the Config folder.
4. In the Exploring window select the Config folder on the Zip, floppy, D, or network drive.
5. From the Edit menu select Copy.
6. In the Exploring window select C:\Cwks.
7. From the Edit menu select Paste.
8. If you also saved actions, repeat steps 3 through 7 for the Actions folder.
9. If you are working with a removable disk, remove it from the drive.

8.9 Using KEA! with ConsoleWorks

Select **Change|Connect Settings** in the left navigation panel. Then select the option button labeled **Use Java Telnet Proxy**. Select **Consoles** in the left navigation panel, then select the console from the list. Use the desktop icon to open KEA! and create a new session.

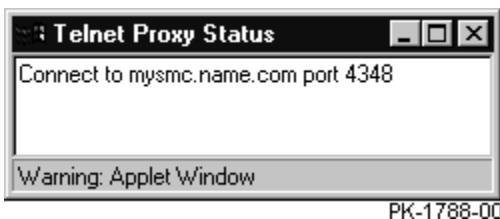
Privileges required: Admin - none; Console - none

Figure 8-42 Console Connections Settings Screen



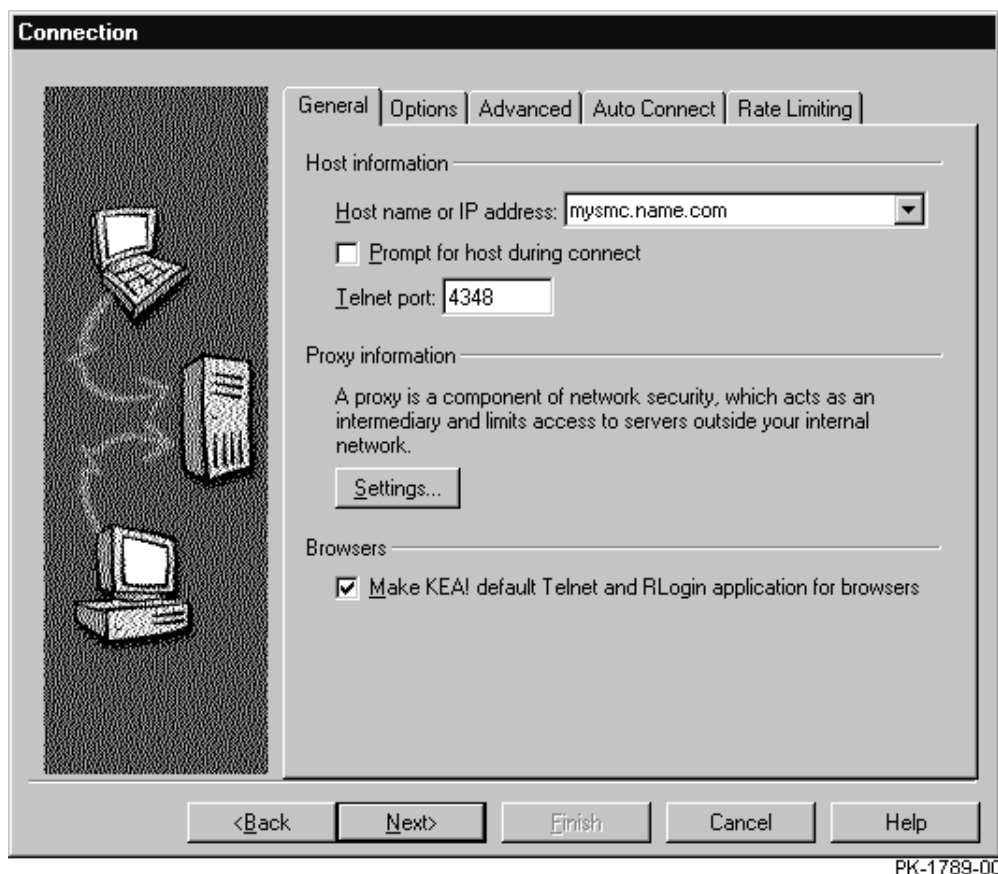
1. Select Change in the left navigation panel. From the selection links select Connect Settings. The Console Connection Settings screen displays (Figure 8-42). Select the Use Java Telnet Proxy option button. The change takes effect immediately.
2. In the left navigation panel select Consoles. The Show Consoles screen displays. Select the console to which you want to connect KEA!. The *console_name* Configuration screen displays.
3. At the top of the screen select Connect. The Telnet Proxy Status window displays (Figure 8-43), showing the port number. (You might need to expand this window to read the port number.)
4. Open KEA! (there is a desktop icon) and create a new session. In the Connection wizard (Figure 8-44 on page 8-62) use the fully qualified name or the IP address of the SMC for the host name. Use the port number displayed in the Telnet Proxy Status window for the Telnet port.

Figure 8-43 Telnet Proxy Status Window



PK-1788-00

Figure 8-44 KEA! Connection Window



Chapter 9

Compaq AlphaServer Partition Manager

The Compaq AlphaServer Partition Manager (CAPM) simplifies creation of partitions. Sections in this chapter are:

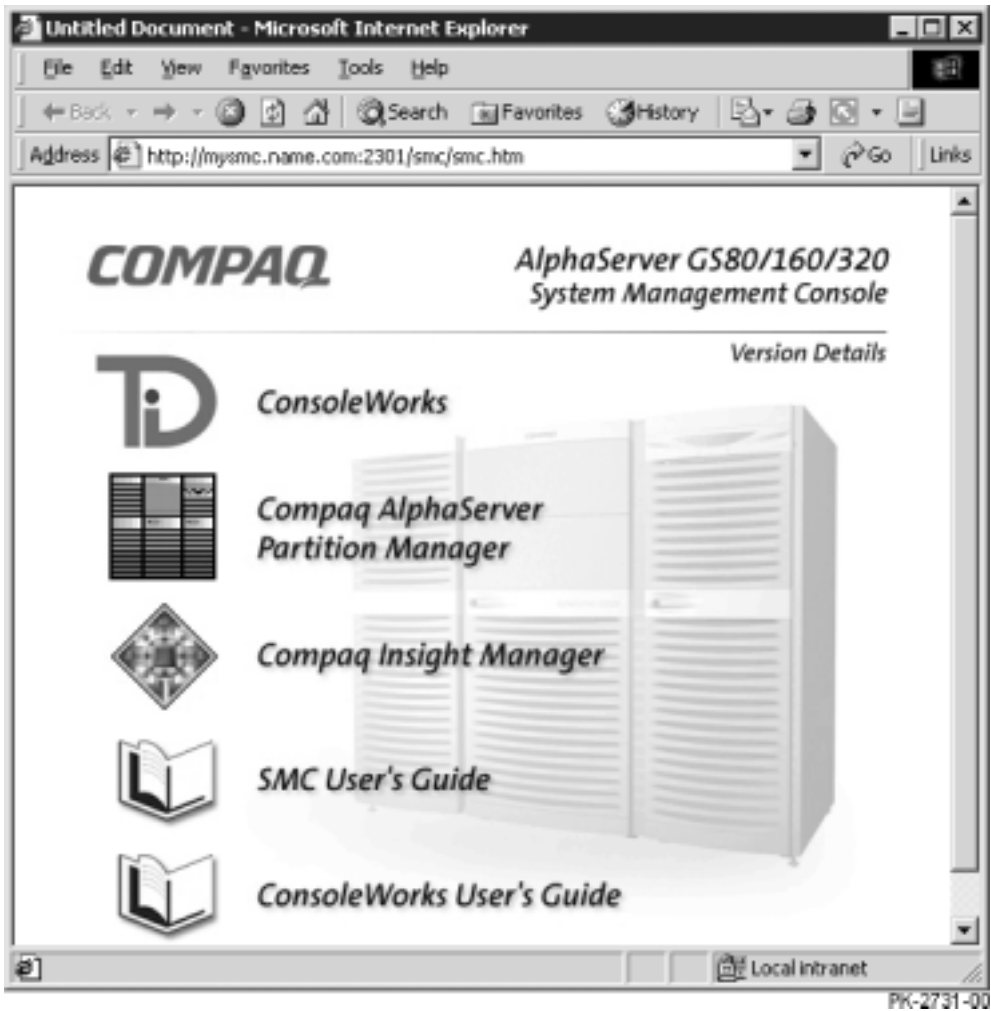
- Starting CAPM
- Overview of CAPM
- Partition Maps
- Working With Hard Partitions
 - Creating Hard Partitions
 - Adding a Hard Partition
 - Deleting a Hard Partition
 - Modifying a Partition Map
 - Saving, Validating, and Committing a Partition Map
 - Loading a Saved Partition Map
- Working With Soft Partitions
 - Basic Soft Partitioning
 - Adding a Soft Partition
 - Advanced Soft Partitioning
- Managing CAPM Files

NOTE: *CAPM is designed to run on an SMC connected to a single GS80/160/320 system. Any other configuration is unsupported.*

9.1 Starting CAPM

Start CAPM from the SMC desktop icon or from the SMC Web page.

Figure 9-1 SMC Web Page



You can run CAPM directly from the desktop icon on the SMC or from the SMC Web page.

- To run CAPM from the SMC system, double-click the CAPM desktop icon:



- To run CAPM from a workstation networked to the SMC system, click the icon on the SMC Web page (Figure 9-1). To display the SMC Web page on a system running Windows, enter this in the browser Address box:
`http://name.domain:2301/smc/smc.htm`, where *name.domain* is the fully qualified address or the IP address of the SMC on the corporate network; press Enter. To display the SMC Web page on a system with a browser that does not work with JavaScript, DOM and DHTML, enter this in the Address box: `http://name.domain:2301/smc/smca.htm`.

You must have the Java Runtime Environment (JRE) running on the system on which you are working. JRE for Windows NT is on the SMC CD (\SMC_V3_1_kit\JRE\j2re-1_3_0_01-win-i.exe); for other platforms, it can be downloaded from www.javasoft.com.

Before You Begin

Before you run CAPM, it is recommended, but not required, that you delete any consoles that will never be used from ConsoleWorks (see Section 8.4.2). CAPM runs faster without unused consoles, since the application scans all consoles as it starts. For best performance, and for accurate data from CAPM, be sure that the number of consoles listed in ConsoleWorks matches the number of master standard I/O modules in the GS80/160/320 system.

When you run CAPM, the ConsoleWorks and CAPM services must be running, but the ConsoleWorks application must not be running. These Windows NT services must be running on the SMC: ConsoleWorks LMF Server Service, ConsoleWorks Server Service, and Compaq CAPM Server. Additionally, if you run CAPM from the SMC Web page, the Compaq SMC HMMO Server service must be running on the SMC system. All of these services are started automatically when the SMC starts.

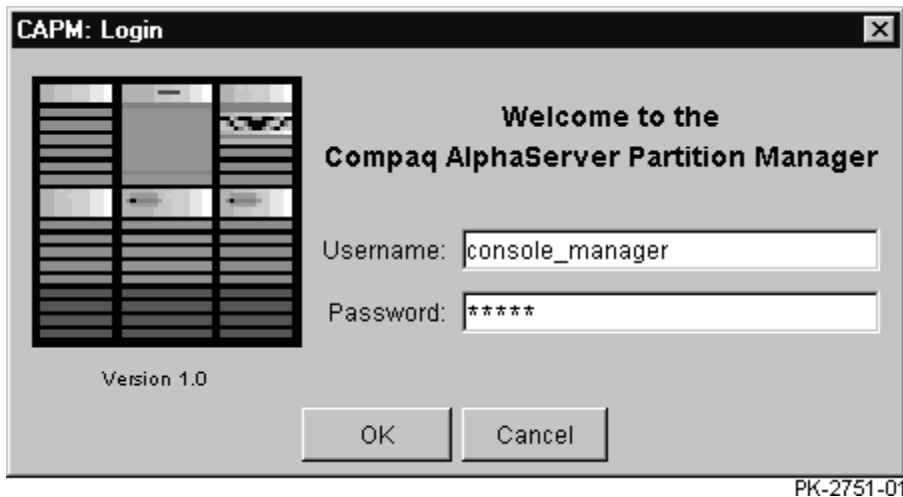
CAPM is a single-user application. Only one user can run it at a time (from the SMC system or a network location) to partition a GS80/160/320 system.

All operating system instances on the GS80/160/320 system must be halted before CAPM can be run. If any operating system instance is running, CAPM displays a message and exits.

9.2 Overview of CAPM

CAPM enables the user to partition a GS80/160/320 system without using console commands.

Figure 9-2 Login Box



Compaq AlphaServer Partition Manager (CAPM) is a graphical application that simplifies the creation and management of partitions¹ on a GS80/160/320 system. CAPM runs on the SMC and, through a wizard-like series of screens, enables you to work with partitions without having to know anything about the console commands involved. These can be hard partitions and, if OpenVMS Galaxy is the operating system in a hard partition, soft partitions.

CAPM uses ConsoleWorks usernames and passwords. When you start CAPM, the login box displays (Figure 9–2). Supply a username and password for a ConsoleWorks user. This user must be associated with a ConsoleWorks profile that has full privileges. If you enter an invalid username or password, an error message displays. Click OK to redisplay the login box.

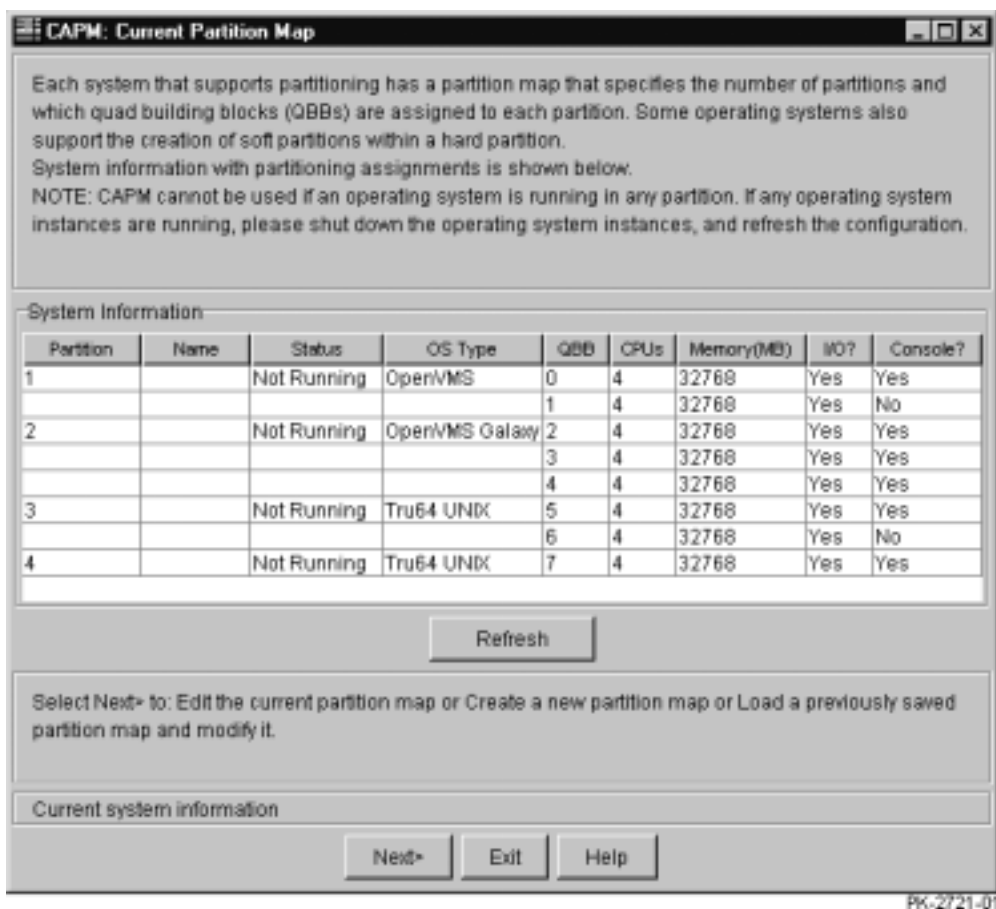
After the username and password are validated, CAPM connects to the GS80/160/320 system and discovers its configuration. This discovery phase can take up to several minutes; the length of time depends on the size of the system and the number of consoles that have been configured in ConsoleWorks. Do not minimize the screen during the discovery phase or use the SMC system for any other operation. When the discovery phase is complete, CAPM displays a partition map for the current system configuration.

¹ If you are not familiar with partitions, see the *AlphaServer GS80/160/320 Getting Started with Partitions* manual.

9.3 Partition Maps

The partition map provides partitioning information about the GS80/160/320 system.

Figure 9-3 Sample Partition Map



NOTE: *Partition numbering in CAPM differs from partition numbering shown in the output of console commands.*

Figure 9–3 shows the Current Partition Map screen. The partition map provides information about the GS80/160/320 system in the form of a table.

The parts of the display are described here.

Partition – A number from 1 to the number of quad building blocks (QBB) in the system (maximum 8) or Unassigned. Any QBB that has not explicitly been assigned to a partition is part of the Unassigned partition. If the system has already been partitioned, with either CAPM or console commands, and this partitioning is still in effect, that partitioning information is displayed here.

Name – The name you give to the partition in the Add/Modify Hard Partition screen. Naming the partition is optional.

Status – Running if the QBB is powered up; otherwise Not Running.

OS Type – The operating system that will run in this partition. This is set in the Add/Modify Hard Partition screen and can be Tru64 UNIX, OpenVMS, OpenVMS Galaxy, or Unknown.

QBB – The hard QBB number.² There is one line in the partition map for each QBB.

CPUs – The number of CPUs found by CAPM in the QBB during the discovery process.

Memory – The amount of memory (in megabytes) found by CAPM in the QBB during the discovery process.

I/O? – Yes if CAPM detected an I/O adapter in the PCI box with the standard I/O module; otherwise No.

Console? – Yes if CAPM found a standard I/O module during discovery; otherwise No.

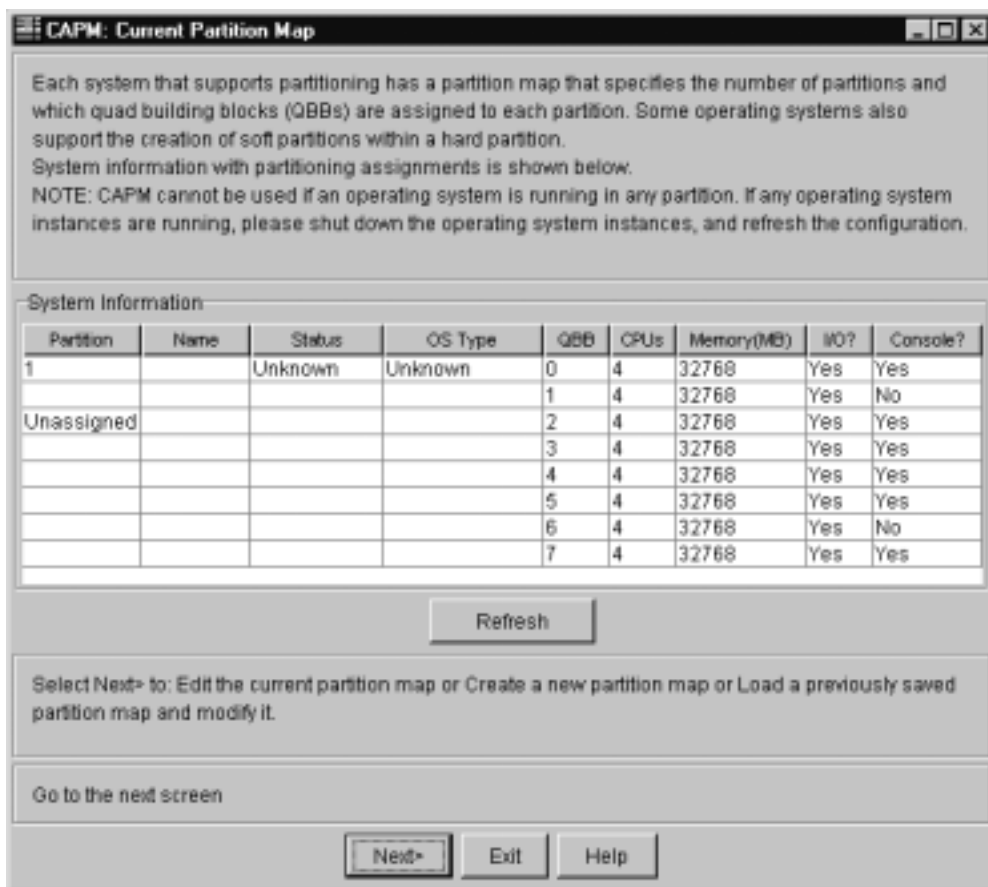
You can resize the columns in the display by clicking on a divider between columns and dragging. Roll the mouse over a button at the bottom of the screen to see a description of it in the block above the buttons.

² CAPM uses only hard QBB numbers. See the *AlphaServer GS80/160/320 Firmware Reference Manual* for a discussion of hard and soft QBB numbers.

9.4 Working With Hard Partitions

Hard partitions do not share resources. CAPM can create, add, and delete hard partitions and modify, save, validate, and commit partition maps.

Figure 9-4 Current Partition Map Screen



PK-2756-01

When you start CAPM, the first screen that displays (after the login box) is the Current Partition Map (**Figure 9–4**), which shows hard partition information. Section 9.3 describes the information that is displayed in a partition map.

The GS80/160/320 system can have two types of partitions, hard and soft. In this section we look at hard partitions; Section 9.5 discusses soft partitions.

Hard partitions do not share any CPU, memory, or I/O resources. In other words, the boundaries of these partitions are hard. An instance of an operating system can run in each hard partition; these instances run independently of each other.

Using CAPM, you can perform several operations on hard partitions. These procedures are described in the following sections:

- **Creating Hard Partitions**
- **Adding a Hard Partition**
- **Deleting a Hard Partition**
- **Modifying a Partition Map**
- **Saving, Validating, and Committing a Partition Map**
- **Loading a Saved Partition Map**

9.4.1 Creating Hard Partitions

Figure 9-5 Work with Partition Maps Screen

CAPM: Work with partition maps

You can modify the current partition map, create a new one, or modify an existing one.
To create a new partition map, specify a name for the map and the number of hard partitions for this system. Each hard partition must contain at least one quad building block(QBB).
NOTE: When you create a new partition map, CAPM creates a suggested partition map based on the number of partitions requested and the configuration rules in effect on this system.
To modify an existing partition map, specify the name of the map below, or use the Browse button to search for the map file.

☐ Modify the current partition map

☒ Create a new partition map

Number of partitions:

☐ Load and modify an existing partition map

Partition Map:

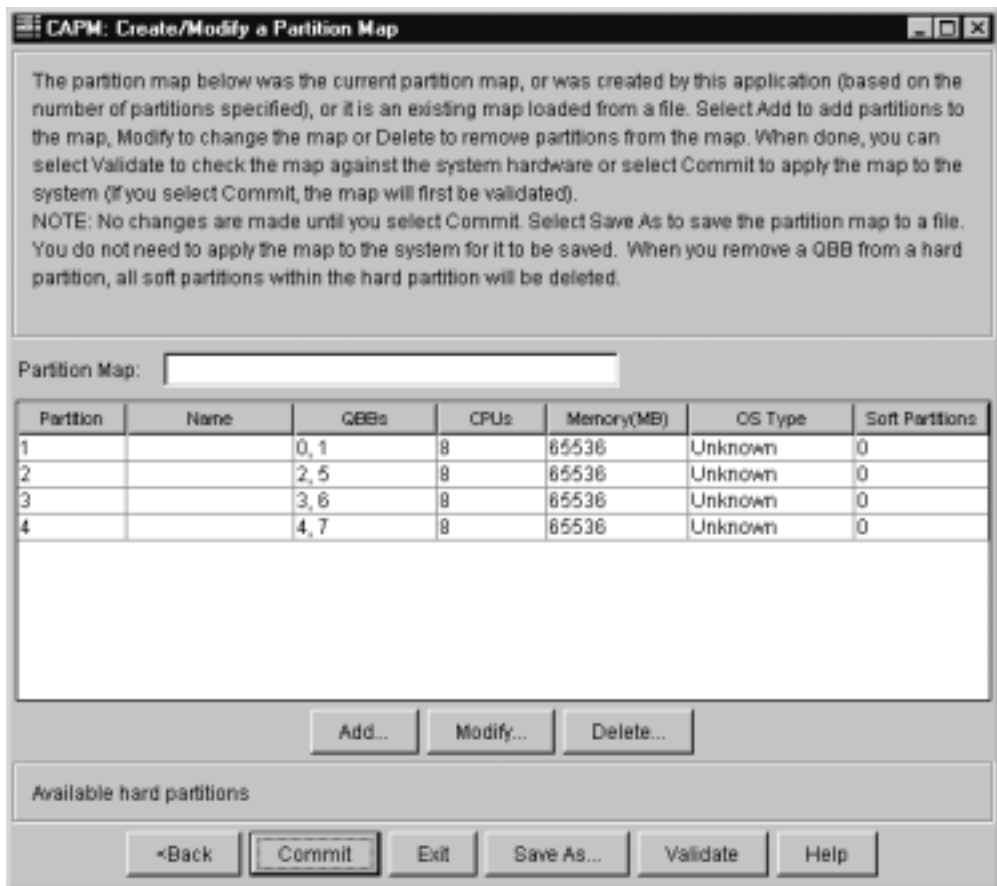
PK-2752-01

1. From the Current Partition Map screen (Figure 9–4), click Next. The Work with Partition Maps screen displays (Figure 9–5).
2. Select the option button labeled *Create a new partition map*.
3. Enter a number in the box labeled *Number of partitions*. Click Next.

If the GS80/160/320 system does not have sufficient resources to create the number of partitions specified, a message displays indicating that the system has insufficient resources.

Continued on page 9-13

Figure 9-6 Create/Modify a Partition Map



PK-2723-01

4. The Create/Modify a Partition Map screen displays (Figure 9–6). This screen includes a suggested partition map created by CAPM based on the number of partitions you selected in the Work with Partition Maps screen. As much as possible, CAPM balances the system resources among the partitions.

Optionally, you can name the partition map by typing the name in the block labeled *Partition Map*. This is not the same as saving the map to a file. (See Section 9.4.5.)

When this new partition map displays, the operating system (OS Type) is listed as Unknown for each partition. To specify the operating system for a partition, select the partition in the map and click Modify.... (See Section 9.4.3.)

9.4.2 Adding a Hard Partition

Figure 9-7 Add/Modify Hard Partition Screen

CAPM: Add/Modify Hard Partition - 2

Name: OS Type:

Available system resources

QBB	CPUs	Mem. (MB)	IO?	Console?	Partition
0	4	32768	Yes	Yes	1
1	4	32768	Yes	No	1
2	4	32768	Yes	Yes	Unassigned
3	4	32768	Yes	Yes	Unassigned
4	4	32768	Yes	Yes	Unassigned
5	4	32768	Yes	Yes	Unassigned
7	4	32768	Yes	Yes	Unassigned

Resources Assigned to this Partition

QBB	CPUs	Mem. (MB)	IO?	Console?
5	4	32768	Yes	No

Total

☒ You have not specified sufficient hardware for a valid partition.

PK-2754-01

1. From the Current Partition Map screen (Figure 9-4) click Next. The Work with Partition Maps screen displays (Figure 9-5).
2. Select the option button labeled *Modify the current partition map*. The Create/Modify Partition Map screen displays (Figure 9-6).
3. Click Add. The Add/Modify Hard Partition screen displays (Figure 9-7). The number of the hard partition is shown in the title bar.
4. Select a QBB in the block labeled *Available system resources* to add it to the partition specified in the title bar; click Add. Repeat with any other QBBs to add.
5. Specify the operating system for the partition in the OS type dropdown list, and, optionally, supply a name for the partition in the name block. Click OK. The Create/Modify a Partition Map screen returns.
6. Repeat steps 3 through 5 to add other partitions.

As QBBs are added, the message below the Total block indicates if the hardware requirements of a partition have been met. Each partition must have

at least one CPU, 64 Mbytes of memory, and an I/O riser module that is connected to a master PCI box with a standard I/O module. The partition shown in Figure 9–7 does not yet have a connection to a PCI box with a standard I/O module. In Figure 9–8 this is resolved by adding QBB 7 to the partition. The message below the Total block now indicates that the hardware requirements for a partition have been met.

NOTE: *You can add an unpowered QBB to a partition if that partition already has at least one QBB that is powered and if the hardware requirements for a valid partition have been met. Memory in the unpowered QBB cannot be seen until the QBB is powered on.*

Figure 9-8 Add/Modify Hard Partition Screen

CAPM: Add/Modify Hard Partition - 2

Name: OS Type:

Available system resources

QBB	CPUs	Mem. (MB)	I/O?	Console?	Partition
0	4	32768	Yes	Yes	1
1	4	32768	Yes	No	1
2	4	32768	Yes	Yes	Unassigned
3	4	32768	Yes	Yes	Unassigned
4	4	32768	Yes	Yes	Unassigned
5	4	32768	Yes	Yes	Unassigned

Resources Assigned to this Partition

QBB	CPUs	Mem. (MB)	I/O?	Console?
6	4	32768	Yes	No
7	4	32768	Yes	Yes

Total 2 18 65536 Yes Yes

☒ The hardware requirements for a valid partition have been met.

Soft Partitions

No soft partitions are defined

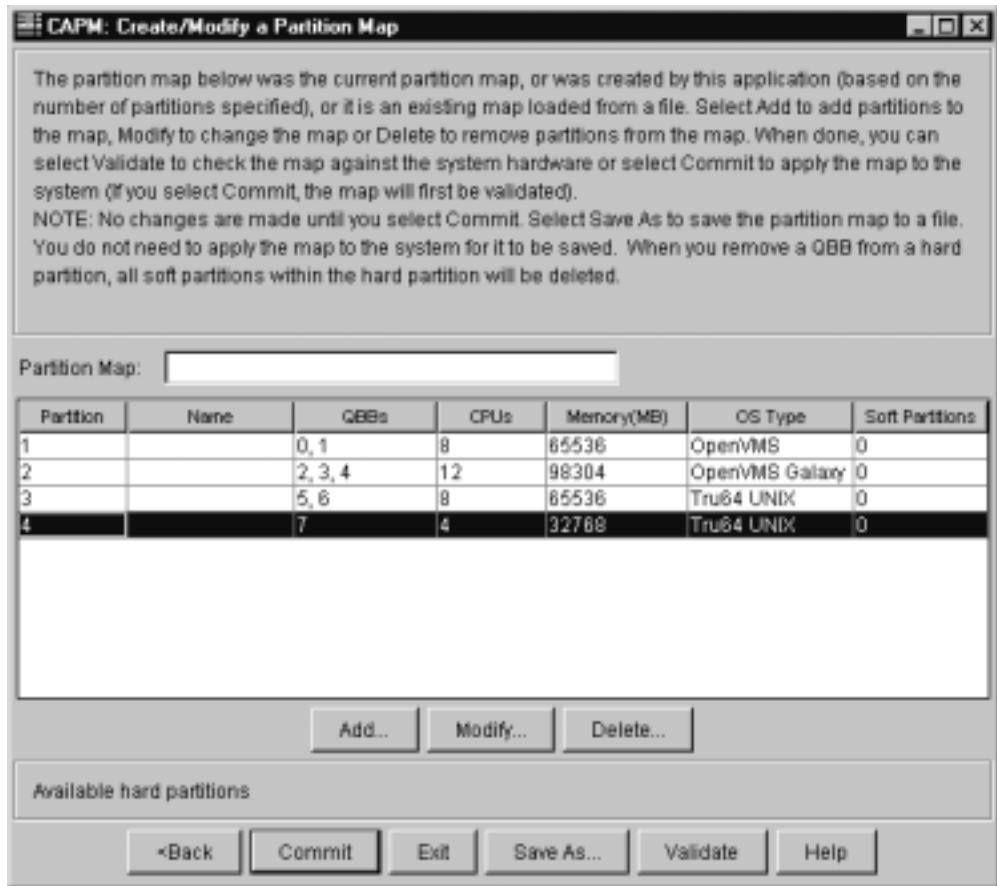
Type: ☒ Basic soft partitioning ☐ Advanced soft partitioning

Add a QBB to the assigned resources table

PR-2765-01

9.4.3 Deleting a Hard Partition

Figure 9-9 Create/Modify a Partition Map Screen



PK-2762-01

1. From the Current Partition Map screen (Figure 9-4) click Next. The Work with Partition Maps screen displays (Figure 9-5).
2. Select the option button labeled *Modify the current partition map*. The Create/Modify a Partition Map screen displays (Figure 9-9).
3. Click to highlight the partition to be deleted, and click the Delete button.

4. A confirmation message displays (Figure 9-10). Click Yes to delete the partition or No to keep the partition.

When a hard partition is deleted, all of its resources are returned to Unassigned, indicating that the hardware is not part of any partition, as shown in Figure 9-11.

Figure 9-10 Delete Confirmation Message

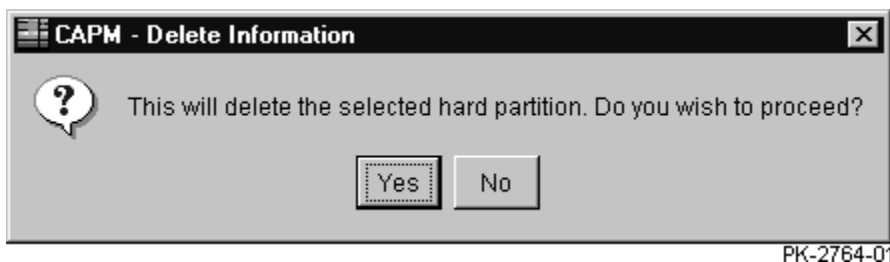
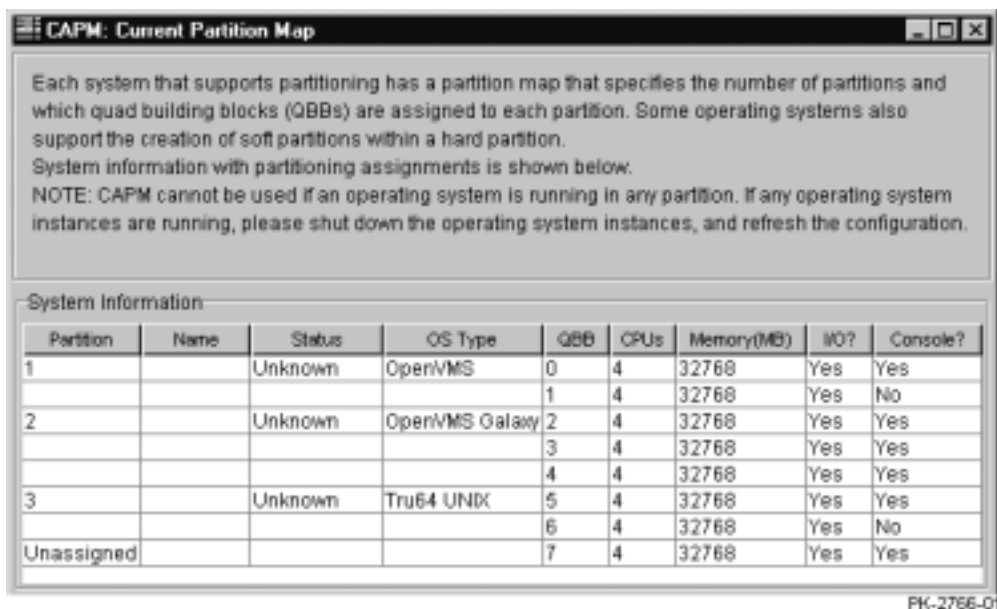
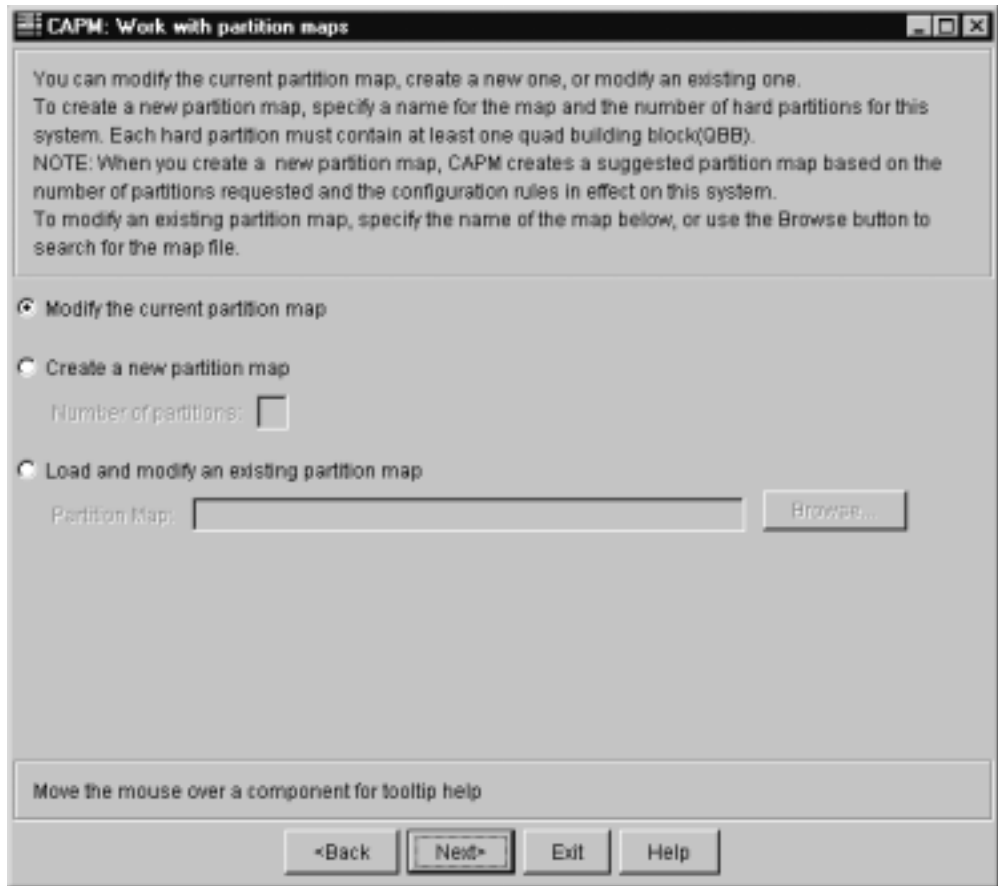


Figure 9-11 Current Partition Map Showing Unassigned Partition



9.4.4 Modifying a Partition Map

Figure 9-12 Work with Partition Maps Screen



PK-2771-01

1. From the Current Partition Map screen (Figure 9–4) click Next. The Work with Partition Maps screen displays (Figure 9–12).
2. Select the option button labeled *Modify the current partition map*. Click Next. The Create/Modify a Partition Map screen displays (Figure 9–9).
3. Click to highlight the partition to be modified, and click the Modify button. The Add/Modify Hard Partition screen displays (Figure 9–13).

4. Do one of the following:
 - Select a QBB in the block labeled *Available system resources* to add it to the partition specified in the title bar; click Add, or
 - Select a QBB in the block labeled *Resources assigned to this partition* to remove it from the partition; click Remove.
5. Specify the operating system for the partition in the OS type dropdown list, and, optionally, supply a name for the partition in the name block. Click OK. The Create/Modify a Partition Map screen returns.
6. Repeat steps 3 through 5 to modify other partitions.

NOTE: A QBB can be assigned to only one partition at a time.

Figure 9-13 Add/Modify Hard Partition Screen

CAPM: Add/Modify Hard Partition - 3

Name: OS Type:

Available system resources

QBB	CPUs	Mem. (MB)	I/O?	Console?	Partition
0	4	32768	Yes	Yes	1
1	4	32768	Yes	No	1
2	4	32768	Yes	Yes	2
3	4	32768	Yes	Yes	2
4	4	32768	Yes	Yes	2
6	4	32768	Yes	No	Unassigned
7	4	32768	Yes	Yes	Unassigned

Resources Assigned to this Partition

QBB	CPUs	Mem. (MB)	I/O?	Console?
5	4	32768	Yes	Yes

Total: 1 CPUs, 4 Mem. (MB), Yes I/O?, Yes Console?

☒ The hardware requirements for a valid partition have been met.

Soft Partitions

No soft partitions are defined

Type: ☒ Basic soft partitioning ☐ Advanced soft partitioning

Move the mouse over a component for tooltip help

PK-2761-01

9.4.5 Saving, Validating, and Committing a Partition Map

Figure 9-14 Saving a Partition Map

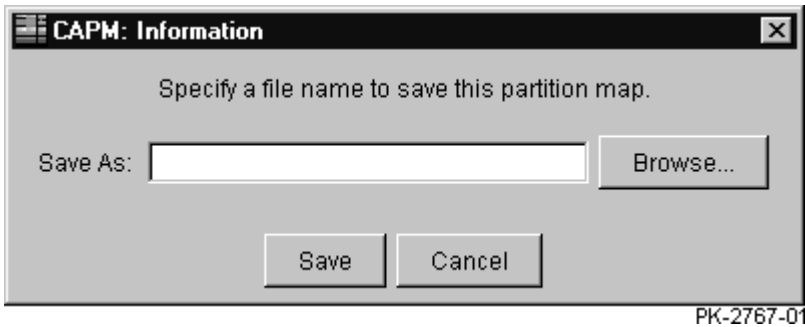
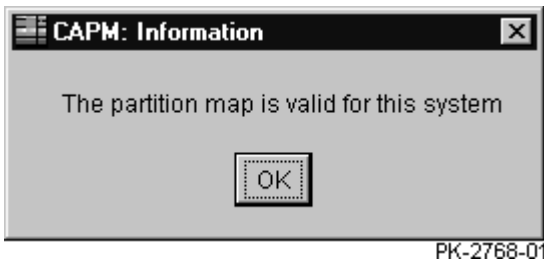


Figure 9-15 Validating a Partition Map



Saving a Partition Map

1. In the Create/Modify a Partition Map screen click the Save As... button. An information box displays (Figure 9–14).
2. Supply a file name and, optionally, change the location to which the file is saved. Click Save. A message confirms that the file was saved successfully.

The default file extension is .PMF (partition management file). The default (and recommended) location is C:\SMC\CAPM\MAPS. When CAPM is launched from the SMC Web page, C:\SMC\CAPM\MAPS is the only location available for saving or loading a partition management file.

Validating a Partition Map

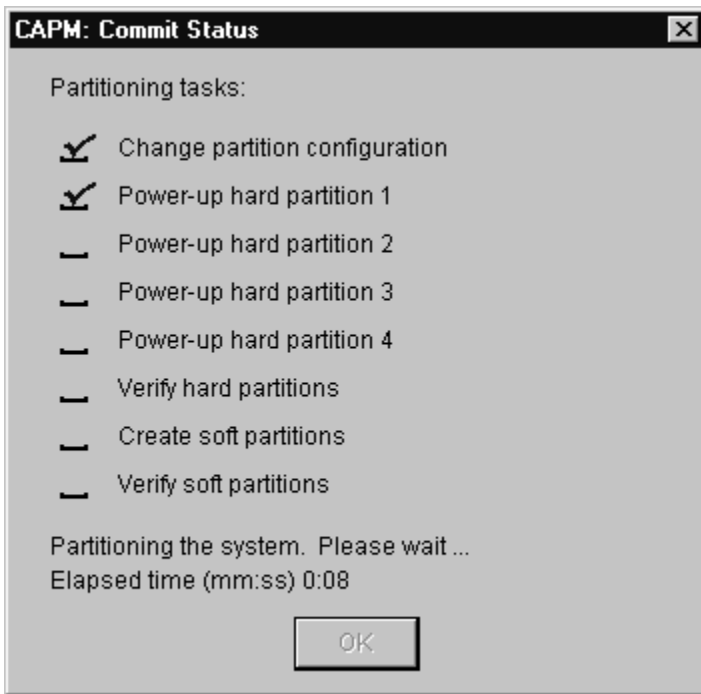
To have CAPM evaluate a partition map and determine if it is valid, in the Create/Modify a Partition Map screen click the Validate button. A message confirms that the partition map is valid (Figure 9-15) or indicates that it is not valid.

Committing a Partition Map

To commit the partition map to the GS80/160/320 system, in the Create/Modify a Partition Map screen click the Commit button. If the map has not been saved to a file, a message displays asking you to do so.

When you click Commit, CAPM first validates the configuration, then it applies the map to the GS80/160/320 system and restarts the system. A status box displays (Figure 9-16), showing the progress of the commit, and the commit status is written to the log file. (See Section 9.6.)

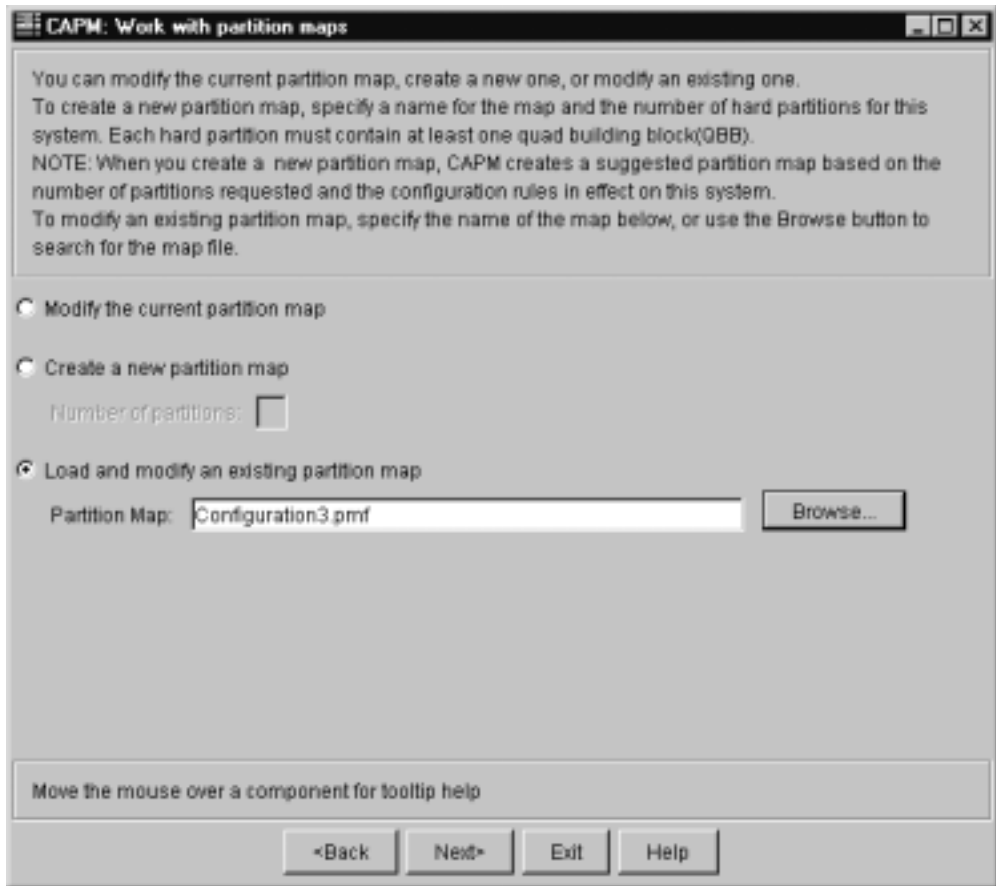
Figure 9-16 Committing a Partition Map



PK-2769-01

9.4.6 Loading a Saved Partition Map

Figure 9-17 Work with Partition Maps Screen



PK-2770-01

1. In the Current Partition Map screen click Next. The Work with Partition Maps screen displays (Figure 9–17).
2. Select the option button labeled *Load and modify an existing partition map*. Enter the file name of a partition map that has been saved to a file (see Section 9.4.5) in the Partition Map box, or click the Browse button to find the file. The default file extension is .PMF.

NOTE: *If you are running CAPM from a location other than the SMC system, the partition map file must be in the Maps folder on the SMC system (C:\SMC\CAPM\MAPS).*

3. Click Next. The Create/Modify a Partition Map screen displays. From this screen you can perform any of the procedures in Sections 9.4.2 through 9.4.5.

CAPM does not validate the partition map file when it loads. To ensure that the map is valid, click the Validate button in the Create/Modify a Partition Map screen. (See Section 9.4.5.)

9.5 Working With Soft Partitions

Soft partitions can share memory, and CPUs can be moved among them. CAPM can create soft partitions by two methods.

Figure 9-18 Add/Modify Hard Partition Screen Showing Soft Partitioning Options

CAPM: Add/Modify Hard Partition - 2

Name: OS Type:

Available system resources

GBB	CPUs	Mem. (MB)	IO?	Console?	Partition
0	4	32768	Yes	Yes	1
1	4	32768	Yes	No	1
5	4	32768	Yes	Yes	3
6	4	32768	Yes	No	3
7	4	32768	Yes	Yes	4

Add>

<Remove

Resources Assigned to this Partition

GBB	CPUs	Mem. (MB)	IO?	Console?
2	4	32768	Yes	Yes
3	4	32768	Yes	Yes
4	4	32768	Yes	Yes

Total

☒ The hardware requirements for a valid partition have been met.

Soft Partitions

No soft partitions are defined

Type: ☒ Basic soft partitioning ☐ Advanced soft partitioning

Soft Partitions...

Move the mouse over a component for tooltip help

OK Cancel

PK-2728-01

Soft partitions are implemented within the boundaries of a hard partition. A portion of memory can be defined so it is shared among all the soft partitions in the hard partition. In addition, CPUs can be reassigned to other soft partitions. Because of this sharing of resources, the boundaries of these partitions are considered soft.

The hardware requirements for a soft partition are the same as for a hard partition: at least one CPU, 64 Mbytes of memory, and an I/O riser module that is connected to a master PCI box with a standard I/O module.

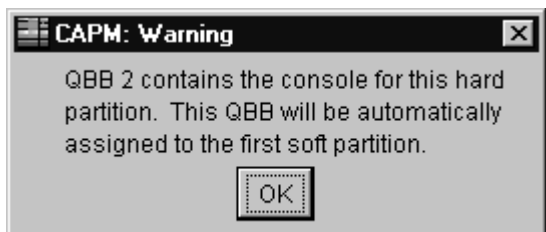
When the operating system for a hard partition is OpenVMS Galaxy, two option buttons are available in the Add/Modify Hard Partition screen (Figure 9–18) for specifying the method to use when working with soft partitions:

- **Basic soft partitioning** – Enables you to create, modify, and delete soft partitions without needing to know about the environment variables that are used. Each soft partition created by this method consists of one or more QBBs. Sections 9.5.1 through 9.5.4 discuss this method of working with soft partitions.
- **Advanced soft partitioning** – Enables you to work with soft partitions by specifying values for the relevant environment variables. This method is for experienced users only. See Section 9.5.5.

NOTE: *Do not attempt to create soft partitions if the hard partition contains an unpowered QBB. Commit the hard partitions first (see Section 9.4.5), and then create the soft partitions. When the hard partitions are committed, the unpowered QBB is powered on.*

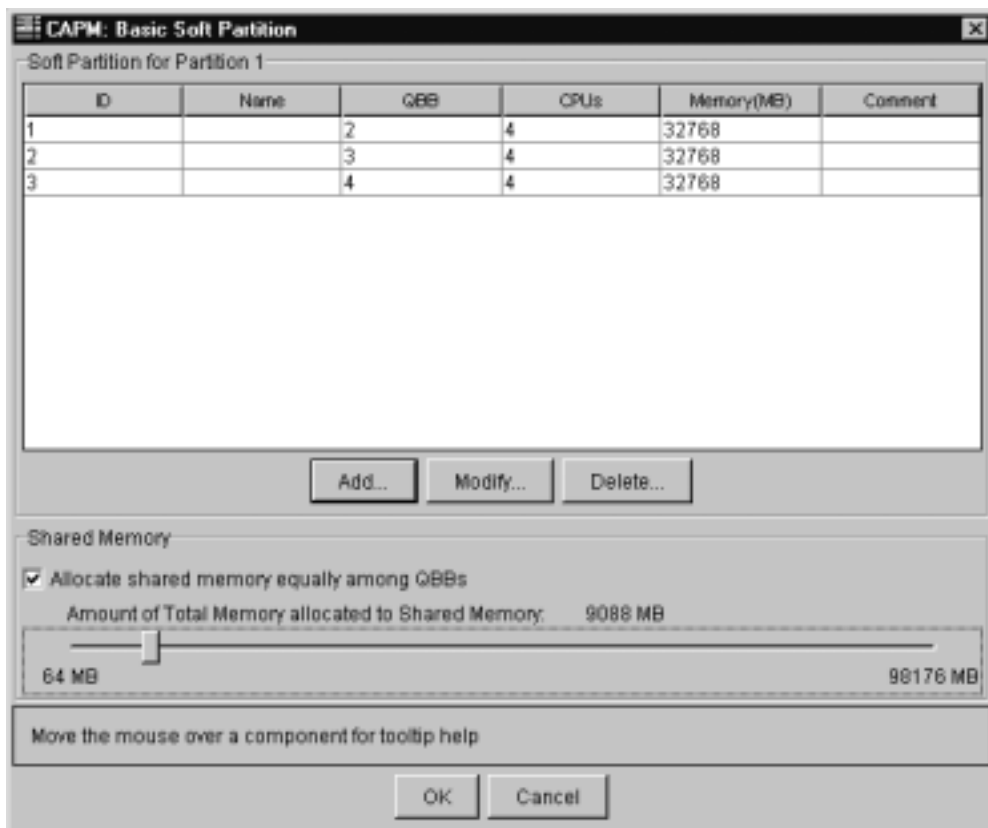
9.5.1 Basic Soft Partitioning

Figure 9-19 Basic Soft Partitioning Message



PK-2772-01

Figure 9-20 Basic Soft Partition Screen



PK-2775-01

1. In the Add/Modify Hard Partition screen (Figure 9–18), select the option button labeled *Basic soft partitioning* and click the Soft Partitions... button.
2. An informational message displays (Figure 9–19), indicating which QBB has the console for the hard partition. This QBB must be assigned to the first soft partition. Click OK.
3. The Basic Soft Partition screen displays (Figure 9–20), with the following information about the soft partitions in this hard partition:

ID – The number of the soft partition within this hard partition. This number is assigned automatically by CAPM.

Name – Optionally given to the soft partition in the Add/Modify Soft Partition screen.

QBB – The hard QBB number.

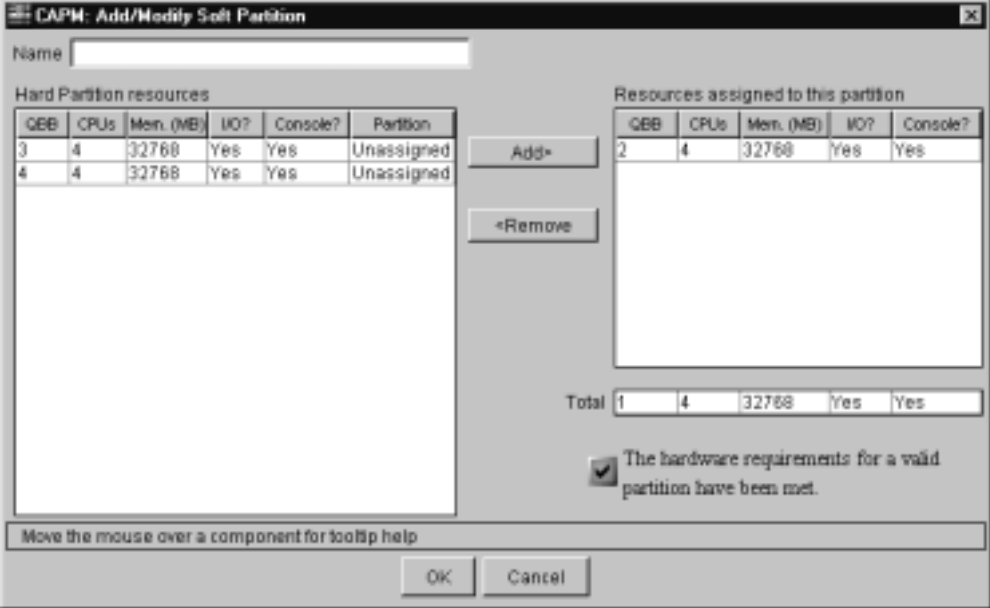
CPUs – The number of CPUs in this soft partition.

Memory – The amount of memory in this soft partition.

Amount of Total Memory allocated to Shared Memory – An amount of memory is allocated to shared memory. The lower limit is 64 MB; the upper limit is the total of memory for all soft partitions within the hard partition less 128 MB.

9.5.2 Adding a Soft Partition

Figure 9-21 Add/Modify Soft Partition Screen



The dialog box is titled "CAPM: Add/Modify Soft Partition". It features a "Name" text field at the top. Below it, the "Hard Partition resources" section contains a table with two rows of data. To the right of this table are "Add" and "Remove" buttons. The "Resources assigned to this partition" section contains a table with one row of data. Below this table is a "Total" row with five data fields. At the bottom, there is a checked checkbox with the text "The hardware requirements for a valid partition have been met." and a status bar with the text "Move the mouse over a component for tooltip help". "OK" and "Cancel" buttons are at the very bottom.

Name:

Hard Partition resources

QBB	CPUs	Mem. (MB)	IO?	Console?	Partition
3	4	32768	Yes	Yes	Unassigned
4	4	32768	Yes	Yes	Unassigned

Add

Remove

Resources assigned to this partition

QBB	CPUs	Mem. (MB)	IO?	Console?
2	4	32768	Yes	Yes

Total: 1 4 32768 Yes Yes

☒ The hardware requirements for a valid partition have been met.

Move the mouse over a component for tooltip help

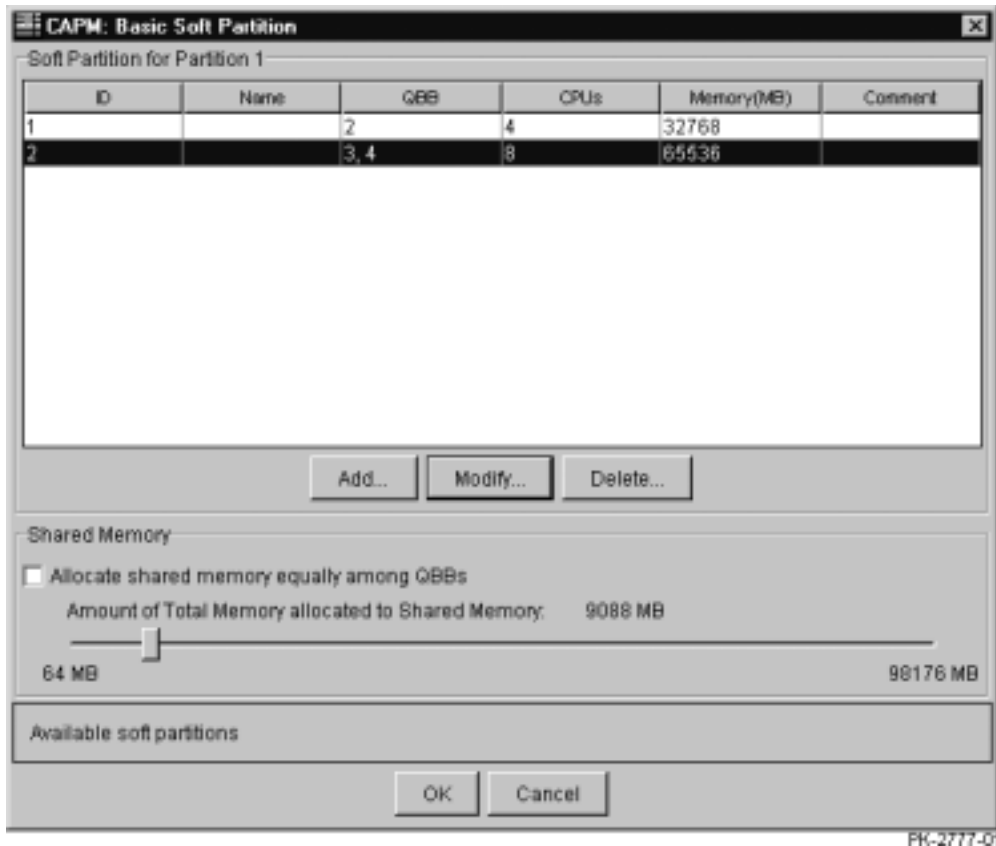
OK Cancel

PK-2774-01

1. In the Basic Soft Partition screen (Figure 9–20), click the Add... button. The Add/Modify Soft Partition screen displays (Figure 9–21). If this is the first soft partition in the hard partition, the QBB that contains the hard partition's console is listed in the block labeled *Resources assigned to this partition*. This QBB must be in the first soft partition; CAPM will not allow you to remove it.
2. Do one of the following in the Add/Modify Soft Partition screen:
 - If no other QBBs are to be added to this soft partition, click OK; or
 - Add another QBB to this soft partition by clicking on the QBB in the box labeled *Hard partition resources* and clicking the Add button. Continue doing this until you have added all the QBBs that belong in this soft partition. Click OK; or
 - Remove a QBB from the soft partition by clicking on the QBB in the box labeled *Resources assigned to this partition* and clicking the Remove button. Click OK.
3. The Basic Soft Partition screen returns, showing the soft partitions that have been configured. Repeat steps 1 and 2 to add other soft partitions.
4. Designate the amount of shared memory and its allocation:
 - a. In the Basic Soft Partition screen, move the slider until the amount of memory to be shared is displayed in the line above the slider. Memory is allocated in 64 MB blocks, so the amount shown is a multiple of 64.
 - b. Select the checkbox labeled *Allocate shared memory equally among QBBs* to take an equal (or nearly equal) amount of memory from each QBB in the hard partition for the shared memory.

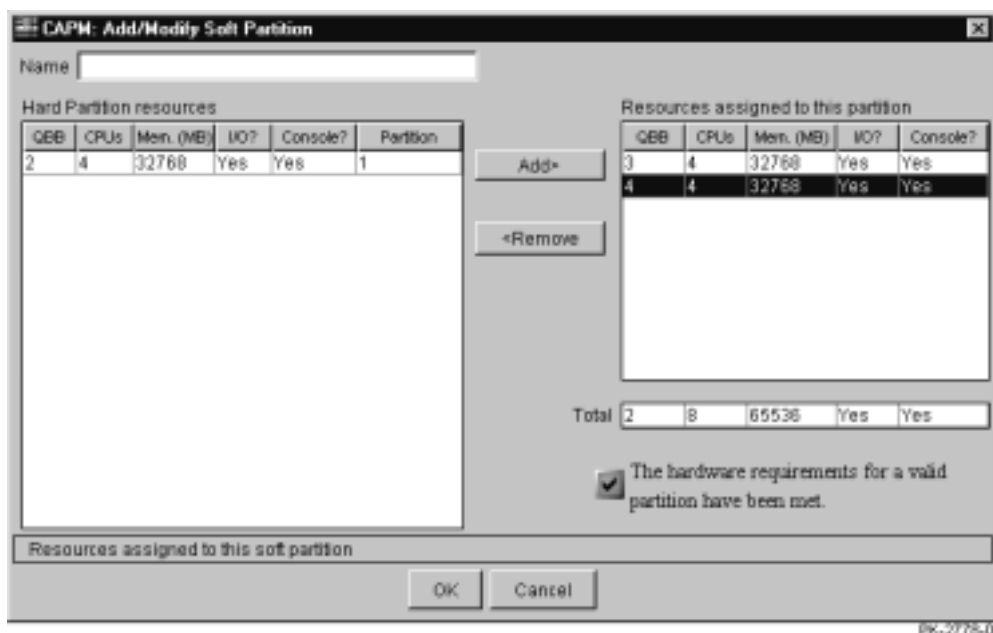
9.5.3 Modifying a Soft Partition

Figure 9-22 Basic Soft Partition Screen; Modifying a Partition



1. In the Basic Soft Partition screen (Figure 9–22), click to select the partition you want to modify and click the Modify... button. The Add/Modify Soft Partition screen displays (Figure 9–23).
2. Do one of the following in the Add/Modify Soft Partition screen:
 - Add another QBB to this soft partition by clicking on a QBB in the box labeled *Hard partition resources* and clicking the Add button. Continue doing this until you have added all the QBBs that belong in this soft partition. Click OK; or
 - Remove a QBB from the soft partition by clicking on a QBB in the box labeled *Resources assigned to this partition* and clicking the Remove button. Click OK.
3. The Basic Soft Partition screen returns. Optionally change the amount of shared memory by moving the slider to the preferred amount and change the allocation by clicking the checkbox labeled *Allocate shared memory equally among QBBs*. Click OK.

Figure 9-23 Add/Modify Soft Partition Screen



9.5.4 Deleting a Soft Partition

Figure 9-24 Basic Soft Partition Screen; Deleting a Partition

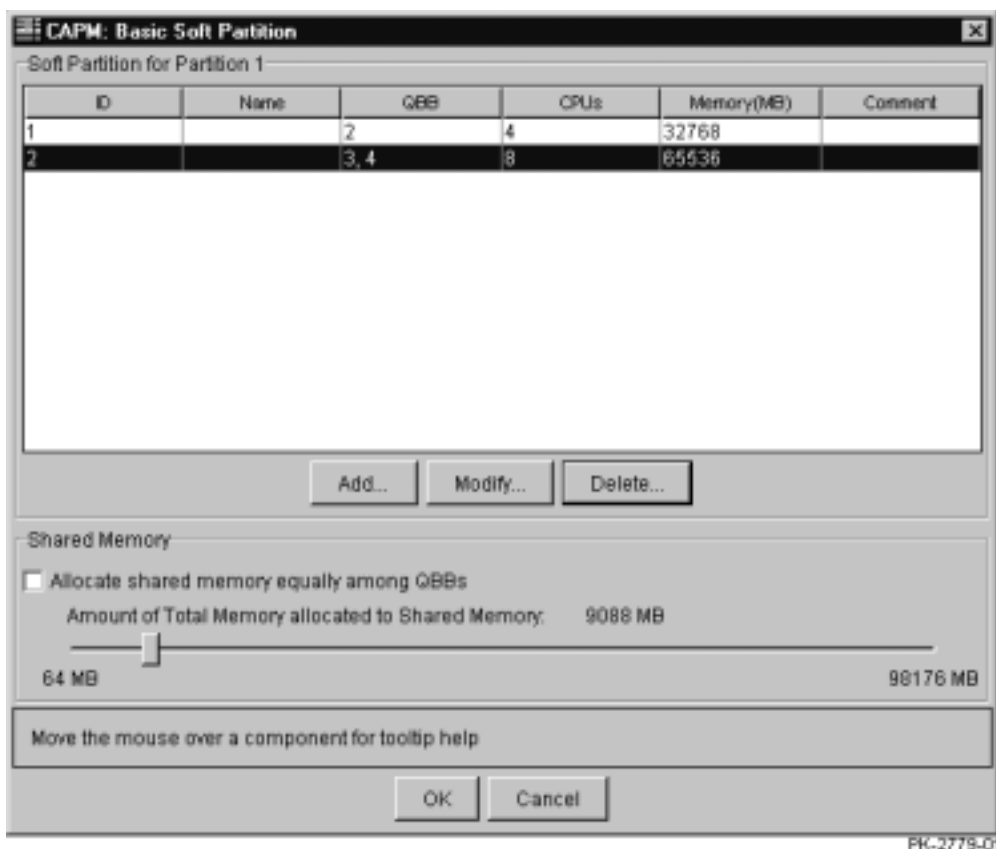
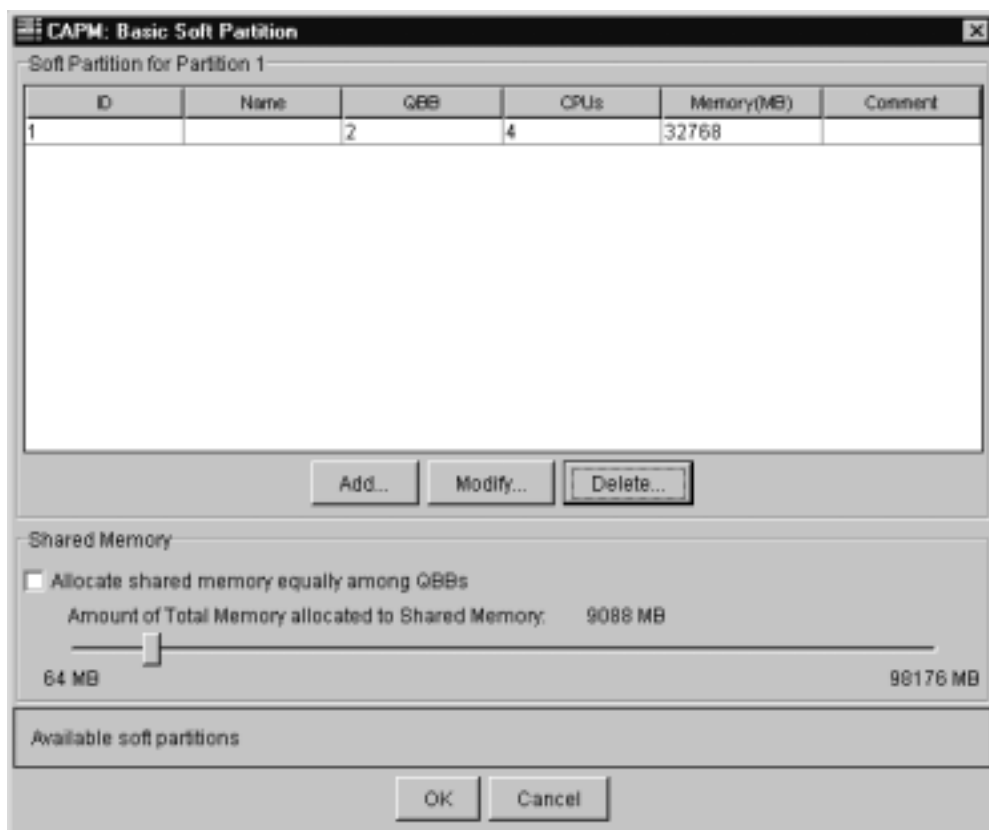


Figure 9-25 Delete Confirmation



1. In the Basic Soft Partition screen (Figure 9–24), click to select the partition you want to delete and click the Delete... button.
2. A message displays, asking for confirmation of the action (Figure 9–25). Click the appropriate button.
3. The Basic Soft Partition screen updates if you chose to delete the partition. (See Figure 9–26.) Click OK.

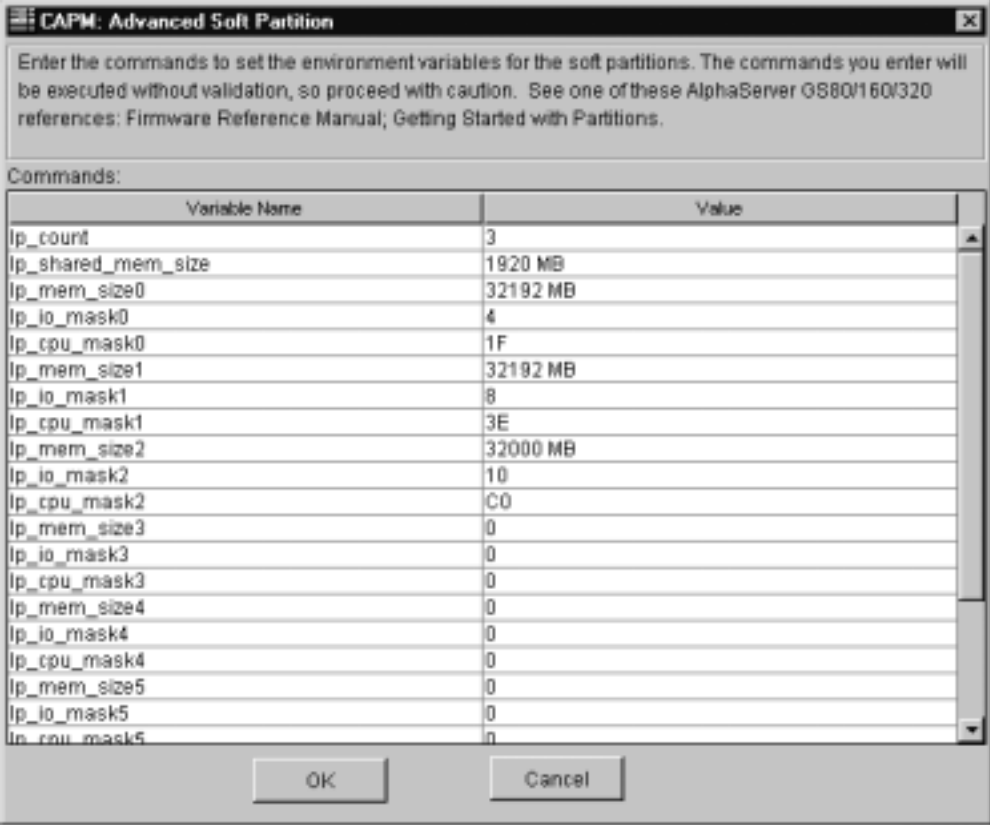
Figure 9-26 Basic Soft Partition Screen; Partition Deleted



PK-2780-01

9.5.5 Advanced Soft Partitioning

Figure 9-27 Advanced Soft Partition Screen



The image shows a dialog box titled "CAPM: Advanced Soft Partition". It contains a warning message and a table for setting environment variables. The table has two columns: "Variable Name" and "Value". The variables include lp_count, lp_shared_mem_size, lp_mem_size0, lp_io_mask0, lp_cpu_mask0, lp_mem_size1, lp_io_mask1, lp_cpu_mask1, lp_mem_size2, lp_io_mask2, lp_cpu_mask2, lp_mem_size3, lp_io_mask3, lp_cpu_mask3, lp_mem_size4, lp_io_mask4, lp_cpu_mask4, lp_mem_size5, lp_io_mask5, and lp_cpu_mask5. The values are set to 3, 1920 MB, 32192 MB, 4, 1F, 32192 MB, 8, 3E, 32000 MB, 10, C0, 0, 0, 0, 0, 0, 0, 0, 0, 0, and 0 respectively. There are "OK" and "Cancel" buttons at the bottom.

Enter the commands to set the environment variables for the soft partitions. The commands you enter will be executed without validation, so proceed with caution. See one of these AlphaServer GS80/160/320 references: Firmware Reference Manual; Getting Started with Partitions.

Commands:

Variable Name	Value
lp_count	3
lp_shared_mem_size	1920 MB
lp_mem_size0	32192 MB
lp_io_mask0	4
lp_cpu_mask0	1F
lp_mem_size1	32192 MB
lp_io_mask1	8
lp_cpu_mask1	3E
lp_mem_size2	32000 MB
lp_io_mask2	10
lp_cpu_mask2	C0
lp_mem_size3	0
lp_io_mask3	0
lp_cpu_mask3	0
lp_mem_size4	0
lp_io_mask4	0
lp_cpu_mask4	0
lp_mem_size5	0
lp_io_mask5	0
lp_cpu_mask5	0

OK Cancel

PK-2730-01

CAUTION: *The Advanced Soft Partition screen is intended for users who are familiar with AlphaServer SRM environment variables. CAPM does not validate any information entered in this screen.*

Advanced Soft Partitioning gives the user more precise control than the Basic Soft Partition process. It requires knowledge of AlphaServer SRM environment variables.

1. In the Add/Modify Hard Partition screen (Figure 9–18), select the option button labeled *Advanced soft partitioning* and click the Soft Partitions... button. The Advanced Soft Partition Screen displays (Figure 9–27).
2. This screen lists the environment variables used to create soft partitions. Enter values for these environment variables in the column on the right. Click OK.

For descriptions of the AlphaServer SRM environment variables used to create soft partitions, and examples of using them, see the *AlphaServer GS80/160/320 Getting Started with Partitions* manual.

9.6 Managing CAPM Files

CAPM creates log files and partition map files.

Example 9-1 Excerpt from a CAPM Log File

```
[Tue Dec 05 12:01:03 EST 2000, pmu.ccm.CwkCCM, 0, Info]
Successful login by console_manager

[Tue Dec 05 12:01:04 EST 2000, pmu.PMUServerImpl, 3, Trace]
Discovery beginning

[Tue Dec 05 12:01:04 EST 2000, pmu.PMUServerImpl, 6, Trace]
Discovering console WF2

[Tue Dec 05 12:01:05 EST 2000, pmu.ccm.CwkCCM, 0, Info]
Opened connection on WF2

[Tue Dec 05 12:01:05 EST 2000, pmu.Console, 2, Info]
console WF2 has id 0

[Tue Dec 05 12:01:05 EST 2000, pmu.PMUServerImpl, 6, Trace]
Discovering console WF1

[Tue Dec 05 12:01:05 EST 2000, pmu.ccm.CwkCCM, 0, Info]
Opened connection on WF1

[Tue Dec 05 12:01:06 EST 2000, pmu.Console, 2, Info]
console WF1 has id 1

[Tue Dec 05 12:01:06 EST 2000, pmu.ccm.CwkCCM, 0, Info]
Opened connection on WF2

[Tue Dec 05 12:01:09 EST 2000, pmu.PMUServerImpl, 6, Trace]
Probing console WF2 with ID=0

[Tue Dec 05 12:01:15 EST 2000, pmu.PMUServerImpl, 6, Trace]
Probing console WF1 with ID=1

[Tue Dec 05 12:01:15 EST 2000, pmu.ccm.CwkCCM, 0, Info]
Opened connection on WF1

[Tue Dec 05 12:01:20 EST 2000, pmu.PMUServerImpl, 5, Trace]
Discovery complete
```


The CAPM log file contains a record of the transaction information and any errors that occur as the application runs. An excerpt from a CAPM log file is shown in Example 9–1. The file is saved to the folder C:\SMC\CAPM\LOGS. Every time CAPM runs, information is appended to the current log file. This file, always named CAPMLOG.TXT, is used until its size reaches 1 MB. It is then renamed CAPMLOG.BAK, and a new CAPMLOG.TXT log is started.

NOTE: *When a new CAPMLOG.TXT file is created, the existing CAPMLOG.BAK file is overwritten. If you want to keep this record of partitioning activity, be sure to back up the LOGS folder regularly.*

As shown in Example 9–1, the information type for each entry is listed in brackets. This is for ease of sorting and processing.

CAPM partition map files are written to C:\SMC\CAPM\MAPS. This is done only when you select the Save As... button and provide a file name. The default extension is .PMF.

Chapter 10

Graphical Configuration Utility

The Graphical Configuration Utility (GCU) is an OpenVMS Galaxy utility for creating and maintaining partitions.

Sections in this chapter are:

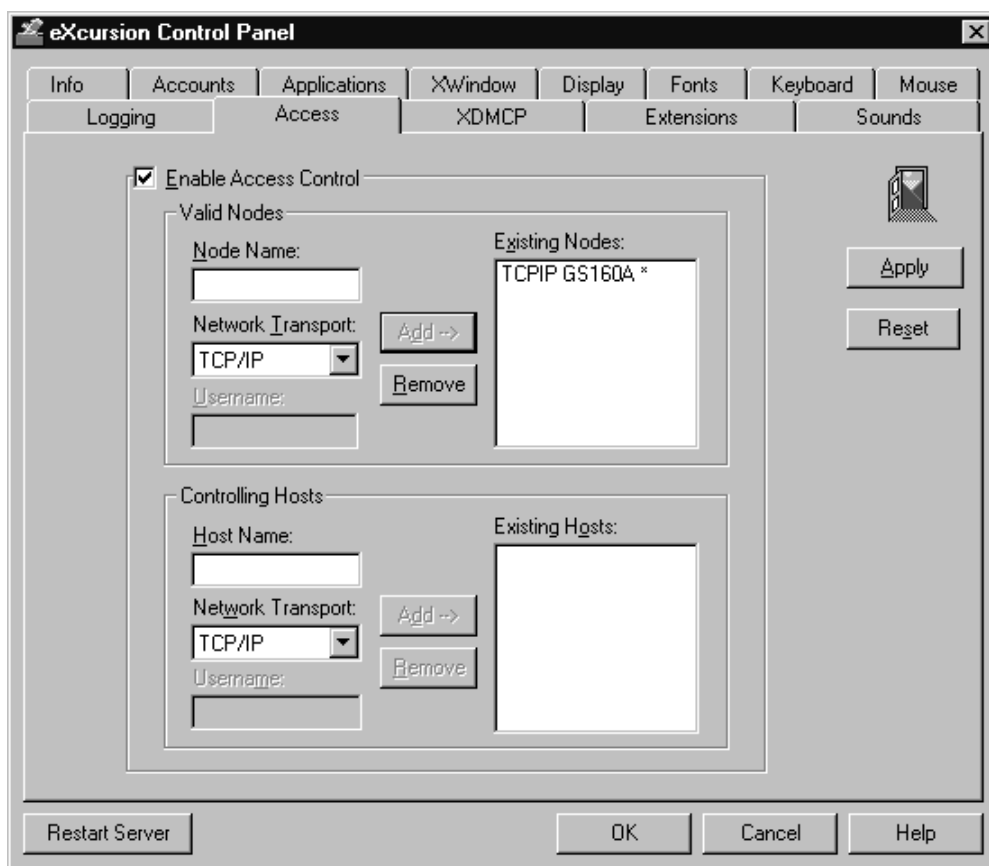
- Setting Up the GCU
- Using the GCU

10.1 Setting Up the GCU

Define information for the Galaxy instances in the eXcursion Control Panel.

10.1.1 Establish Access Control

Figure 10-1 eXcursion Control Panel Access Tab

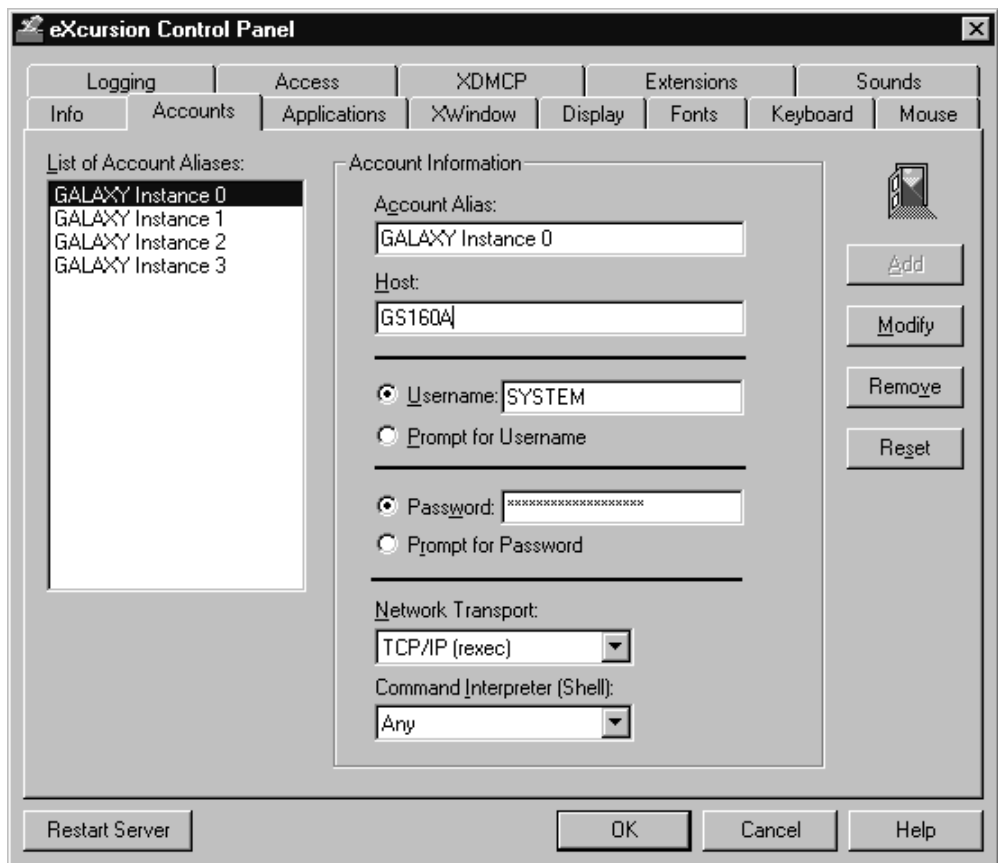


PK-1749-00

1. From the Start menu select Programs | eXcursion V7 | eXcursion Control Panel. The eXcursion Control Panel window opens with the Info tab displayed.
2. Select the Access tab (Figure 10–1).
3. In the Access tab select the Enable Access Control checkbox, enter the Node Name, and click the Add button. Click Apply.

10.1.2 Create an Account for Each Galaxy Instance

Figure 10-2 Accounts Tab

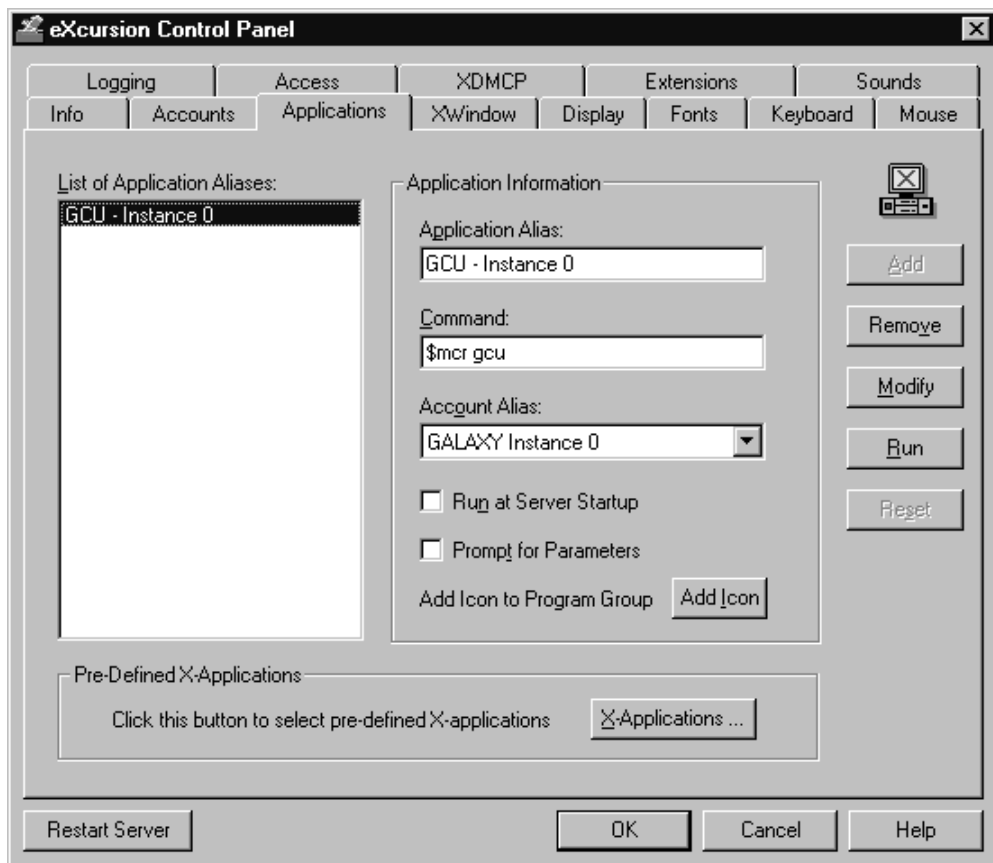


PK-1750-00

1. In the eXcursion Control Panel window select the Accounts tab (Figure 10–2).
2. Enter the Account Alias, Host name, Username, and Password. Click the Add button.
3. Repeat step 2 for each instance.

10.1.3 Define the Applications

Figure 10-3 Applications Tab



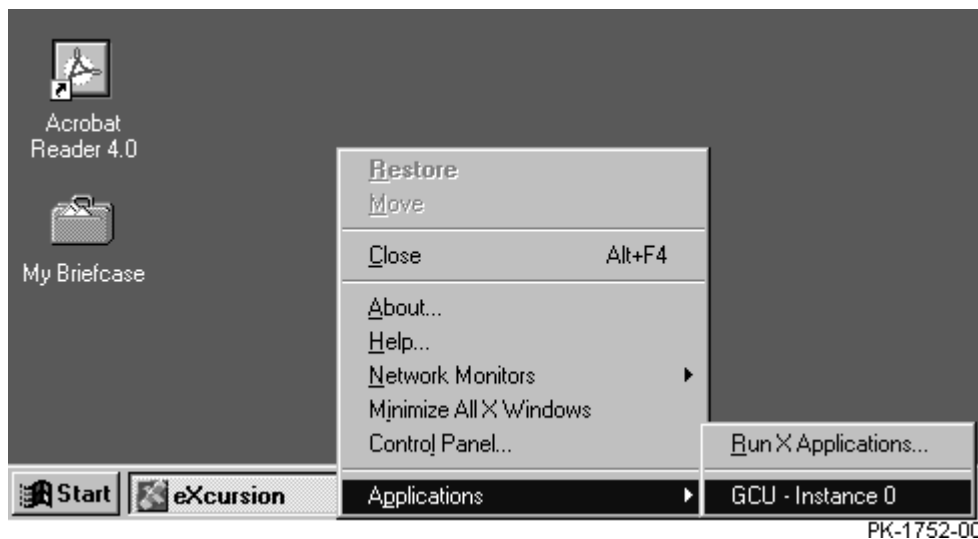
PK-1751-00

1. In the eXcursion Control Panel window select the Applications tab (Figure 10-3).
2. Enter an alias in the Application Alias box.
3. In the Command box enter `$mcr gcu`.
4. Select an Account Alias from the drop-down list.
5. Click the Add button.
6. Repeat steps 2 through 5 for each instance.
7. When an application has been defined for each instance, click OK.

10.2 Using the GCU

From the eXcursion icon select Applications and the Galaxy instance.

Figure 10-4 eXcursion Icon



1. Right-click on the eXcursion icon in the task bar.
2. Select Applications and the name of the Galaxy instance. The Graphical Configuration Utility window displays. See the *OpenVMS Alpha Galaxy Guide* for information on managing Galaxy partitions.

This manual is available in HTML and PDF formats on the Web. Go to URL <http://www.openvms.compaq.com:8000/> and click the link OpenVMS Operating System. Scroll down the list to *OpenVMS Alpha Galaxy Guide*.

Part 4

Troubleshooting

Chapter 11

Troubleshooting

This chapter contains troubleshooting tips for the system management console hardware and software. Sections in this chapter are:

- Troubleshooting Chart
- Changing Baud Rates: System with Multiple Console Lines
- Changing Baud Rates: System with Single Console Line
- Changing the Internet Explorer Proxy Setting
- Starting the ConsoleWorks Services
- Configuring the SMC System to Restart After a Power Failure
- Setting the Path Variable

11.1 Troubleshooting Chart

Table 11-1 lists a number of potential symptoms along with their possible causes and suggested solutions.

Table 11-1 Troubleshooting Chart

Symptom	Possible Cause	Suggested Solution
SMC System		
System takes an inordinate amount of time to boot.	DEFAULT.CONFIG has become too large.	Delete C:\Cwks\Config\DEFAULT.CONFIG. Copy 8_CONSOLE_DEFAULT.CONFIG (systems with multiple console lines) or SERIAL_COM1_DEFAULT.CONFIG (one console line) in the same folder. Rename it DEFAULT.CONFIG. Change attributes from read only to read/write.
Communications		
No communication between the terminal server and the SMC system.	Terminal server is not powered.	Connect the terminal server to the power source (Section B.4 for GS160/320 or C.4 for GS80 system).
	Terminal server software has not been configured.	Configure the software (Sections 5.6 and 5.7).
	SMC is incorrectly cabled.	Check that the cable from the terminal server to the SMC system is connected correctly (Section 3.2).
	Position identifier dial is set incorrectly.	Set the position identifier dial on the terminal server to management agent (Section B.3 for GS160/320 or C.3 for GS80 system).

Table 11-1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
Communications (continued)		
No prompt in a terminal window.	The SMC system and the terminal server are connected by the wrong cable.	Change the cable to a BN24Q.
	Terminal server is hung.	Reload the terminal server using Access Server Manager (Section 5.7).
	Console line is not associated with a partition.	No action required.
	Baud rate mismatch.	Change the baud rate (Sections 11.2 and 11.3).
	Incorrect IP Host setting for terminal server.	Check the console settings in the ConsoleWorks console configuration screen (Section 8.4.3). The IP Host setting should be 90.0.0.1.
	The terminal server and standard I/O module (PCI box) are connected by the wrong cable.	Change the cable to a BN25G.
Text is garbled when UNIX is booting.	The connector on the (PCI box) is the wrong type.	Change the connector to an H8585-AA.
	Partition's baud rate was set to 9600 by UNIX; terminal server's or SMC's baud rate is not 9600.	Set terminal server's or SMC's baud rate to 9600 (Sections 11.2 and 11.3).

Table 11-1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
ConsoleWorks		
ConsoleWorks takes a long time to start.	ConsoleWorks has unused consoles.	Delete consoles that will never be used (Section 8.4.2).
	A large number of events has accrued.	Acknowledge (Section 8.5.5) or expunge (Section 8.5.6) events.
	DEFAULT.CONFIG has become too large.	Delete the file and copy 8_CONSOLE_DEFAULT.CONFIG (systems with a terminal server) or SERIAL_COM1_DEFAULT.CONFIG (no terminal server) to DEFAULT.CONFIG.
	ConsoleWorks is using an increasing amount of physical memory.	Expunge events, and export and import the database (Section 8.5.6)
ConsoleWorks requires an inordinate amount of time to access data.	Proxy server is being used to access local files.	Change Internet Explorer settings (Section 11.4).
	The SMC system has hung. (The pointer does not move when the mouse moves, or windows cannot be selected.)	Reboot the SMC system.
ConsoleWorks does not start.	ConsoleWorks services are not running.	Start ConsoleWorks services (Section 11.5).

Table 11-1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
ConsoleWorks (continued)		
A security warning displays whenever a console is opened.	Certificate authority has not been loaded.	Load the certificate authority (Section 8.4.1).
CAPM		
CAPM does not start.	ConsoleWorks services are not running.	Start ConsoleWorks services (Section 11.5).
	CAPM service is not running.	Start the CAPM service in the same way as the ConsoleWorks services (Section 11.5). The service name is Compaq CAPM Server.
A message displays when you try to start CAPM indicating that the client cannot connect to the server.	CAPM service is not running.	Start the CAPM service in the same way as the ConsoleWorks services (Section 11.5). The service name is Compaq CAPM Server.
CAPM does not run.	You have tried to run CAPM while another user is running it.	Only one client can connect to the CAPM server at a time. Wait for the other user to exit CAPM.
An error message displays when you install or start CAPM, stating that the file JVM.DLL cannot be found on the current path.	The setting for the system-wide variable Path is incorrect.	Edit the setting for the Path variable to include the path for JVM.DLL (Section 11.7).

Table 11-1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
CAPM (continued)		
CAPM reports an unexpected error.	The ConsoleWorks application is open.	Exit ConsoleWorks (but leave the ConsoleWorks services running).
SMC Web Page		
The SMC Web page does not display.	HMMO service is not running on the SMC system.	Start the service in the same way as the ConsoleWorks services (Section 11.5). The service name is Compaq SMC HMMO Server.
	The correct version of JRE is not installed on the system trying to access the Web page.	Install JRE for Windows NT from the SMC software CD (\SMC_V3_1_kit\JRE\j2re-1_3_0_01-win-i.exe). JRE for other platforms can be found at the site www.javasoft.com .
	JavaScript is not enabled in the browser.	Enable JavaScript. Internet Explorer: from the Tools menu select Internet Options Advanced. Netscape: from the Edit menu select Preferences Advanced. Or change the name of the file to SMCA.HTM.
	Java is not enabled in the browser.	Enable Java (menu selections are the same as the item above). Or change the name of the file to SMCA.HTM.
	Browser is not the correct version.	Upgrade the browser. Supported browsers are Internet Explorer 5.0 or later and Netscape 4.7 or later. Or change the name of the file to SMCA.HTM.

Table 11-1 Troubleshooting (Continued)

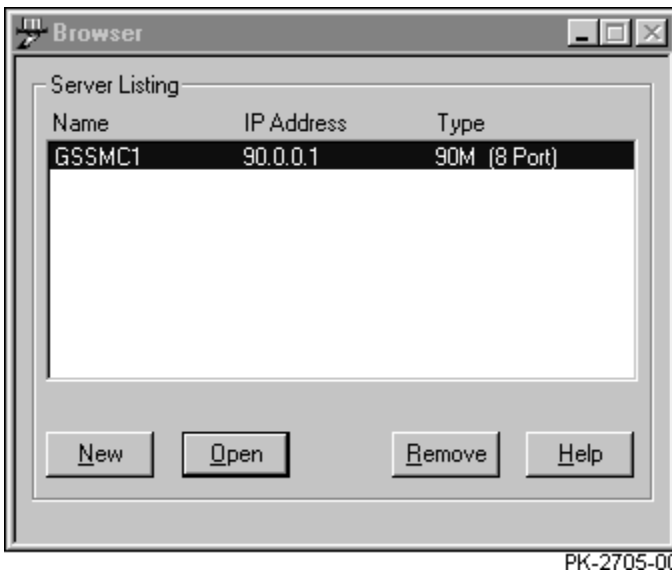
Symptom	Possible Cause	Suggested Solution
SMC Web Page (continued)		
	You are using Netscape V6.0 with Windows 98.	This combination is unsupported; use a previous version of Netscape or use Internet Explorer.
Clicking a link to either of the user guides does not display the manual.	Acrobat Reader is not the correct version.	Upgrade to Acrobat Reader V4.05c or later.
Restart after Power Fail		
The SMC system does not automatically restart after a power failure.	The system has not been configured to restart automatically.	Depending on the model, change a switch setting or a BIOS setting (Section 11.6).

11.2 Changing Baud Rates: System with Multiple Console Lines

Change the terminal server port's baud rate to match the GS80/160/320 partition's rate and establish communication. Then change the partition baud rate to 9600, and finally change the terminal server rate to 9600.

11.2.1 Set the Terminal Server Port Speed to Match the GS80/160/320 Partition Speed

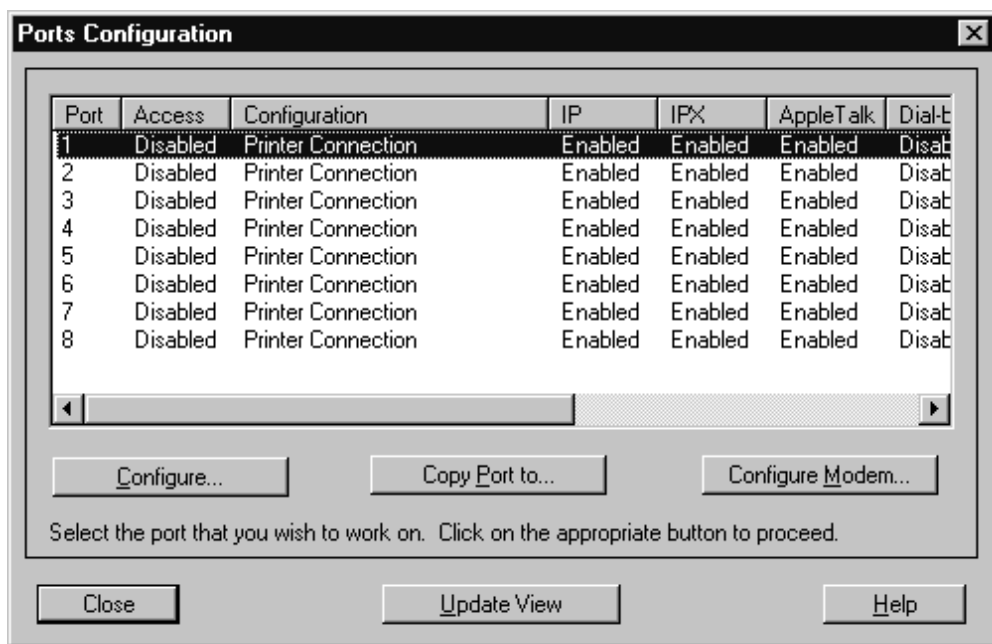
Figure 11-1 Browser Window



1. Open Access Server Manager (ASM). From the Start menu select Programs | Access Server Manager | Access Server Manager. A Browser window displays (Figure 11-1).
2. In the Browser window select the item with IP address 90.0.0.1. Click Open. The Access Server window displays.
3. Select the Configuration tab. In the box, select Ports. Click the Configure... button. The Ports Configuration dialog box displays (Figure 11-2).

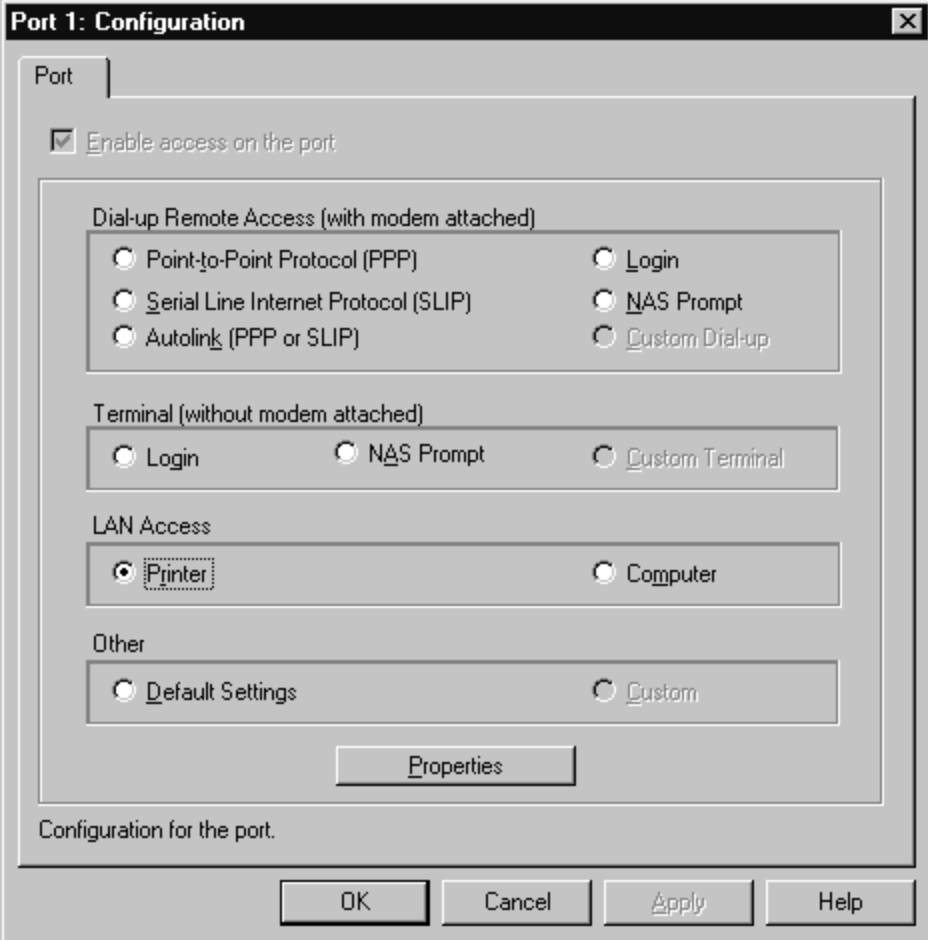
Continued on page 11-11

Figure 11-2 Ports Configuration Dialog Box



PK-2707-00

Figure 11-3 Configuration Dialog Box



The image shows a Windows-style dialog box titled "Port 1: Configuration". It has a tab labeled "Port". Inside the dialog, there is a checked checkbox labeled "Enable access on the port". Below this, there are four sections of radio button options: "Dial-up Remote Access (with modem attached)" with options for PPP, SLIP, Autolink, Login, NAS Prompt, and Custom Dial-up; "Terminal (without modem attached)" with options for Login, NAS Prompt, and Custom Terminal; "LAN Access" with options for Printer (which is selected) and Computer; and "Other" with options for Default Settings and Custom. A "Properties" button is located below the "Other" section. At the bottom of the dialog, there is a label "Configuration for the port." and four buttons: "OK", "Cancel", "Apply", and "Help".

Port 1: Configuration

Port

☒ Enable access on the port

Dial-up Remote Access (with modem attached)

☐ Point-to-Point Protocol (PPP) ☐ Login

☐ Serial Line Internet Protocol (SLIP) ☐ NAS Prompt

☐ Autolink (PPP or SLIP) ☐ Custom Dial-up

Terminal (without modem attached)

☐ Login ☐ NAS Prompt ☐ Custom Terminal

LAN Access

☒ Printer ☐ Computer

Other

☐ Default Settings ☐ Custom

Properties

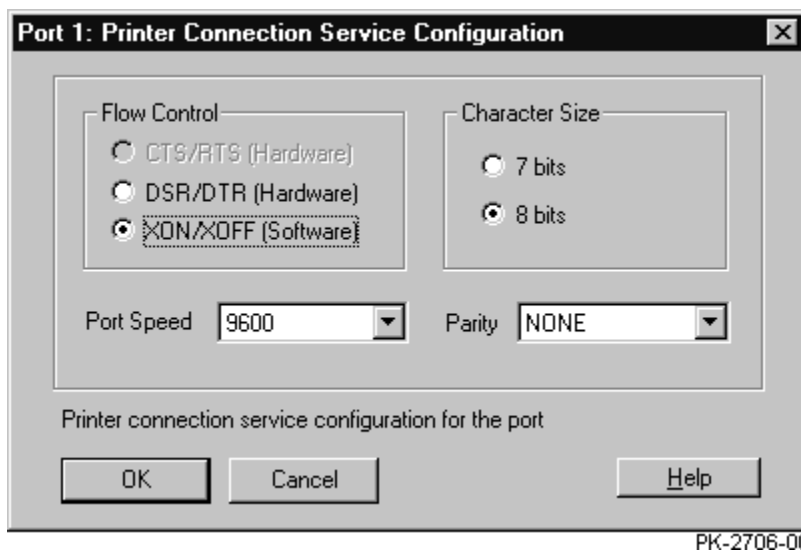
Configuration for the port.

OK Cancel Apply Help

PK-2708-00

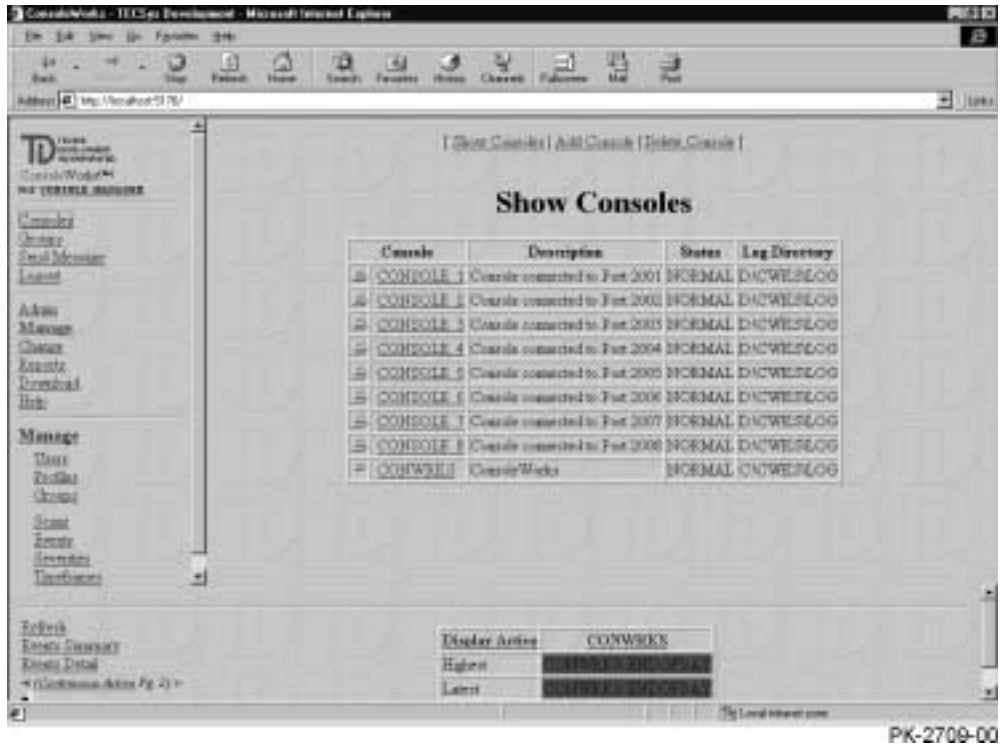
4. Select the port for which you will change the baud rate and click the Configure... button. The Configuration dialog box displays (Figure 11-3).
5. Click the Properties button. The Connection Service Configuration dialog box displays (Figure 11-4).
6. Change the port speed in this box, and check that the other settings are correct for your environment. Click OK.

Figure 11-4 Connection Service Configuration Dialog Box



11.2.2 Test for a Baud Rate Match and Set Both to 9600

Figure 11-5 Show Consoles Screen



PK-2709-00

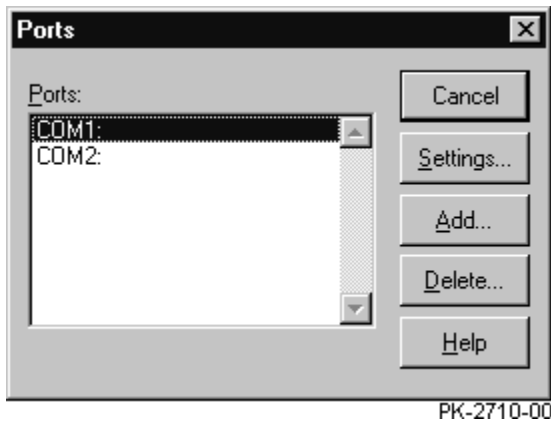
1. In the left navigation panel of a ConsoleWorks window, select Consoles. The Show Consoles screen displays.
2. Find the name of the console that is attached to the port you worked with in Section 11.2.1. Click the icon to the left of the name. A terminal emulator window for the console displays.
3. In the terminal emulator window press Enter. If the SCM or SRM console prompt displays, the baud rate of the terminal server port matches that of the GS80/160/320 partition. If no console prompt displays, return to Section 11.2.1 and set the terminal server port to a different speed. Whether a prompt displays or not, leave the terminal emulator window open.
4. When communication is restored, set the GS80/160/320 partition's baud rate to 9600. From the SRM prompt in the terminal emulator window, type the command `set com1_baud 9600`.
5. Set the terminal server baud rate to 9600.
 - a. Return to the ASM Access Server window.
 - b. Select the port and follow the procedure in Section 11.2.1 to change its speed to 9600.
6. To verify that baud rates match, return to the terminal emulator window and press Enter. A prompt displays when the rates match.

11.3 Changing Baud Rates: System with Single Console Line

Change the baud rate of the system's COM1 port to match the GS80/160/320 system and establish communication. Then change the system rate to 9600, and finally change the COM1 rate to 9600.

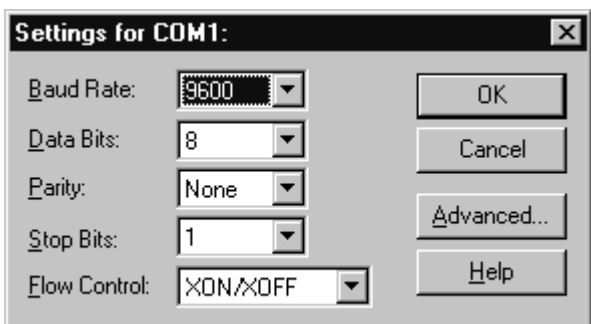
11.3.1 Set the SMC System Speed to Match the GS80/160/320 Speed

Figure 11-6 Ports Dialog Box



1. From the Start button select Settings | Control Panel.
2. In the control panel, double click the Ports icon. The Ports dialog box displays (Figure 11-6).
3. Select COM1 and click the Settings... button. The Settings for COM1 dialog box displays (Figure 11-7).
4. Change the baud rate, and check that the other settings are correct for your environment. Click OK.

Figure 11-7 Settings for COM1 Dialog Box



PK-2711-00

11.3.2 Test for a Baud Rate Match and Set Both to 9600

Figure 11-8 Show Consoles Screen

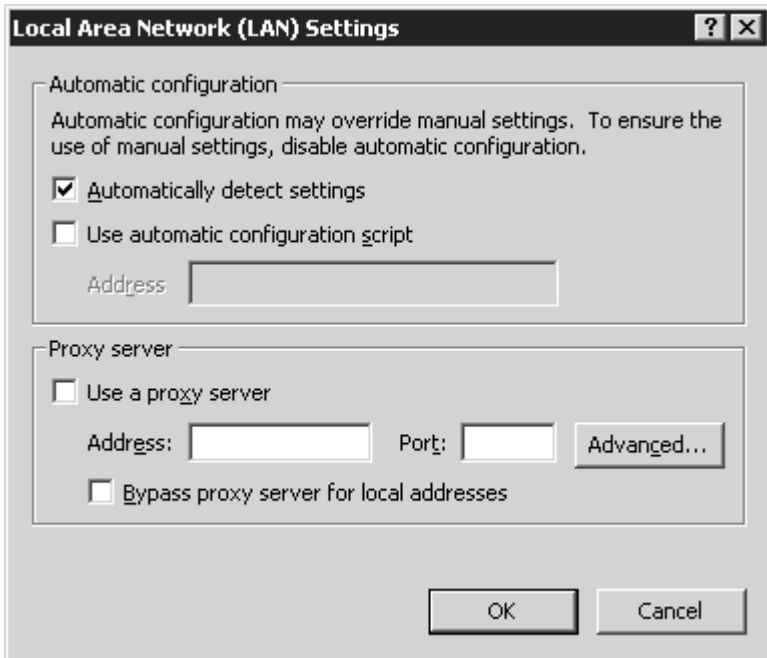


1. In the left navigation panel of a ConsoleWorks window, select Consoles. The Show Consoles screen displays (Figure 11–8).
2. Click the icon to the left of the CONSOLE_1 link. A terminal emulator window for the console displays.
3. In the terminal emulator window press Enter. If an SRM console prompt displays, the baud rates match, and you can set the GS80/160/320 baud rate (step 4). If a prompt does not display, return to Section 11.3.1 and set the COM1 speed to a different setting.
4. At the SRM prompt, type `set com1_baud 9600`.
5. Set the SMC system's COM1 baud rate to 9600 (Section 11.3.1).
6. To verify that baud rates match, return to the terminal emulator window and press Enter. A prompt displays when the rates match.

11.4 Changing the Internet Explorer Proxy Setting

From the Internet Explorer Tools menu select Internet Options. Select the Connections tab and LAN Settings.

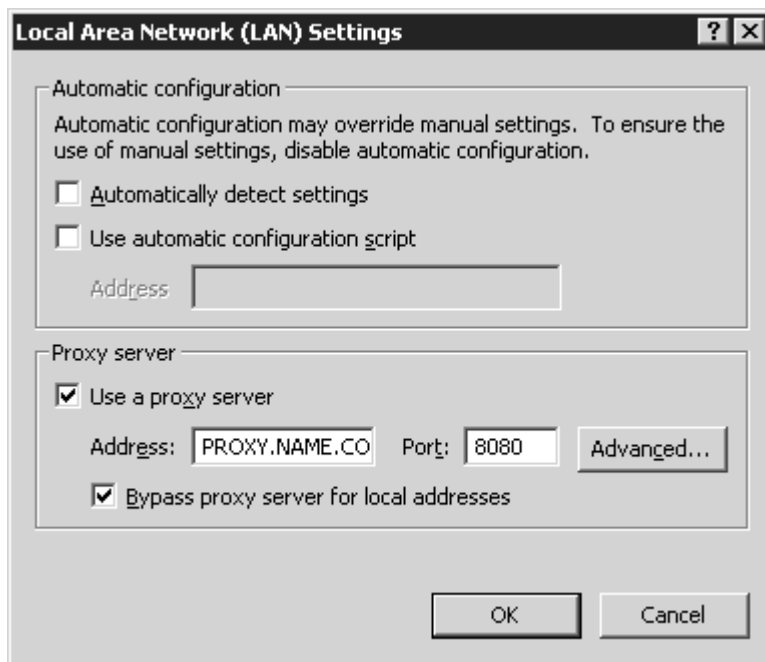
Figure 11-9 LAN Settings Dialog Box - Automatic Configuration



PK-2713-00

1. Ask the network administrator if settings are configured automatically or if proxy server information must be entered.
2. From the Tools menu select Internet Options... The Internet Options dialog box displays.
3. Select the Connections tab. Near the bottom click the LAN Settings... button. The Local Area Network (LAN) Settings dialog box displays.
4. Based on the network administrator's answer in step 1, do one of the following:
 - In the Automatic configuration section click the checkbox labeled *Automatically detect settings* (Figure 11-9). Click OK.
 - In the Proxy server section click the checkbox labeled *Use a proxy server* (Figure 11-10). In the Address box enter the proxy server address for your site. Click the checkbox labeled *Bypass proxy server for local addresses*. Click OK.

Figure 11-10 LAN Settings Dialog Box - Proxy Server

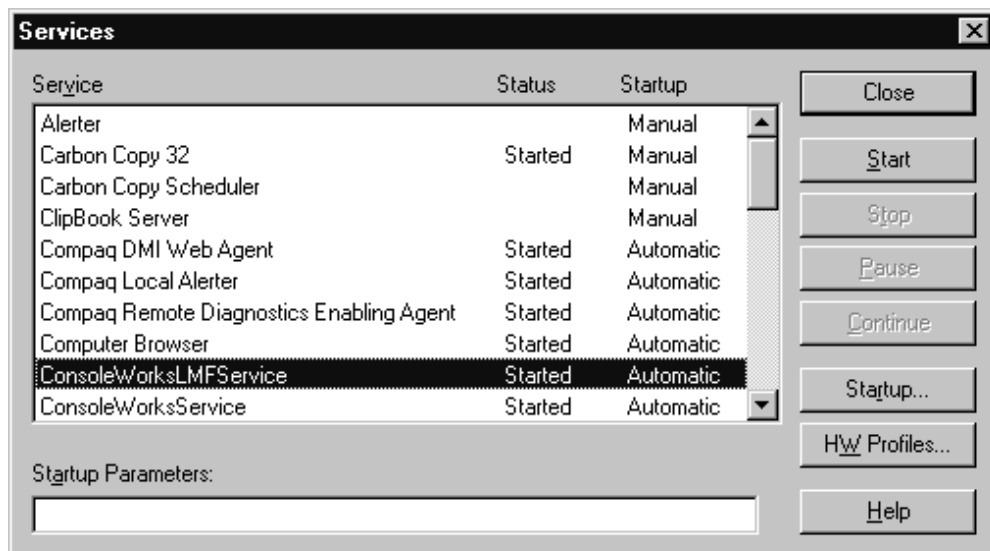


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11.5 Starting the ConsoleWorks Services

Open the Control Panel and double-click the Services icon. Select the ConsoleWorks services and click Start.

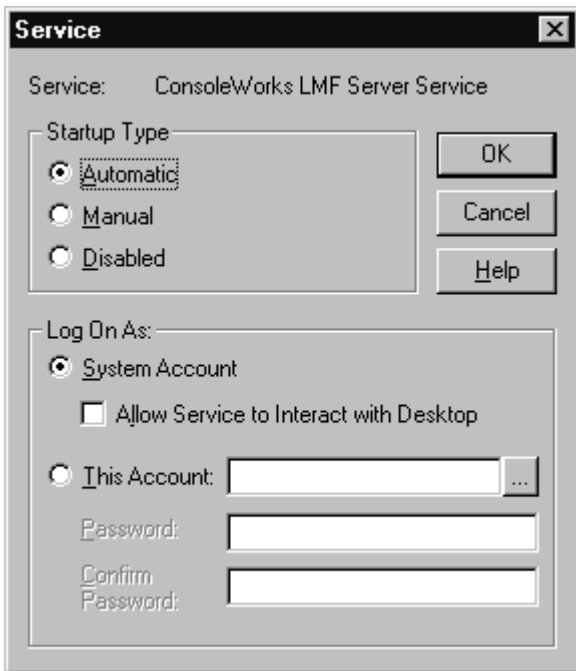
Figure 11-11 ConsoleWorks Services



PK-2727-00

1. Open the Control Panel. From the Start button select Settings | Control Panel.
2. In the Control Panel double-click the Services icon. The Services dialog box displays (Figure 11-11).
3. Check the Status and Startup columns for the two ConsoleWorks services. If one or both do not look like the illustration, do the following:
 - a. To change the status: Select a service and click Start. Repeat with the other service.
 - b. To change the startup type: Select a service and click Startup.... In the Service dialog box (Figure 11-12), select the startup type Automatic and click OK.

Figure 11-12 Service Dialog Box

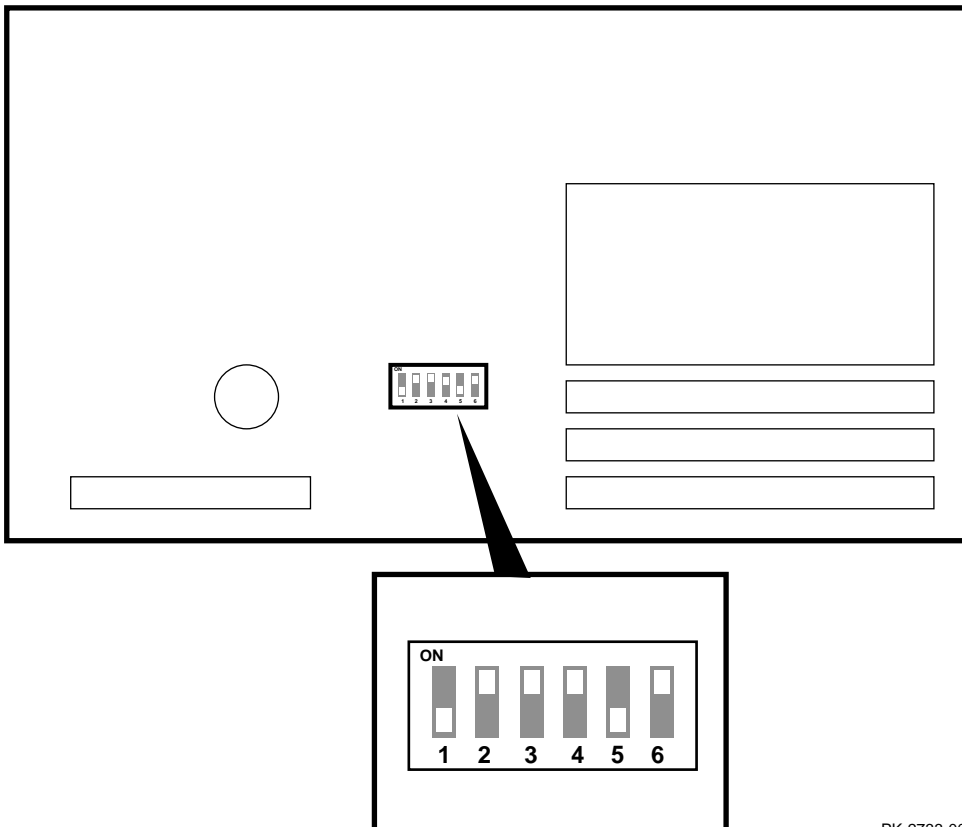


PK-2749-00

11.6 Configuring the SMC System to Restart After a Power Failure

The SMC system should power up and boot following a power failure. If it does not, corrective action is necessary. The action to take depends on the system model.

Figure 11-13 Switch Setting for Models DPENM and DPEND



PK-2733-00

Location of Model Type Information

The instructions below differ according to model. You can determine the model of the SMC system by looking at the label on the top or side of the minitower or desktop box.

Models DPENM and DPEND

1. Shut down the SMC system and disconnect the power cord.
2. Remove the cover from the SMC box.
3. Locate the switchpack on the motherboard. Figure 11-13 and the label inside the SMC cover show the location of the switchpack.
4. Set switch 6 to on (Figure 11-13).
5. Replace the cover and connect the power cord.

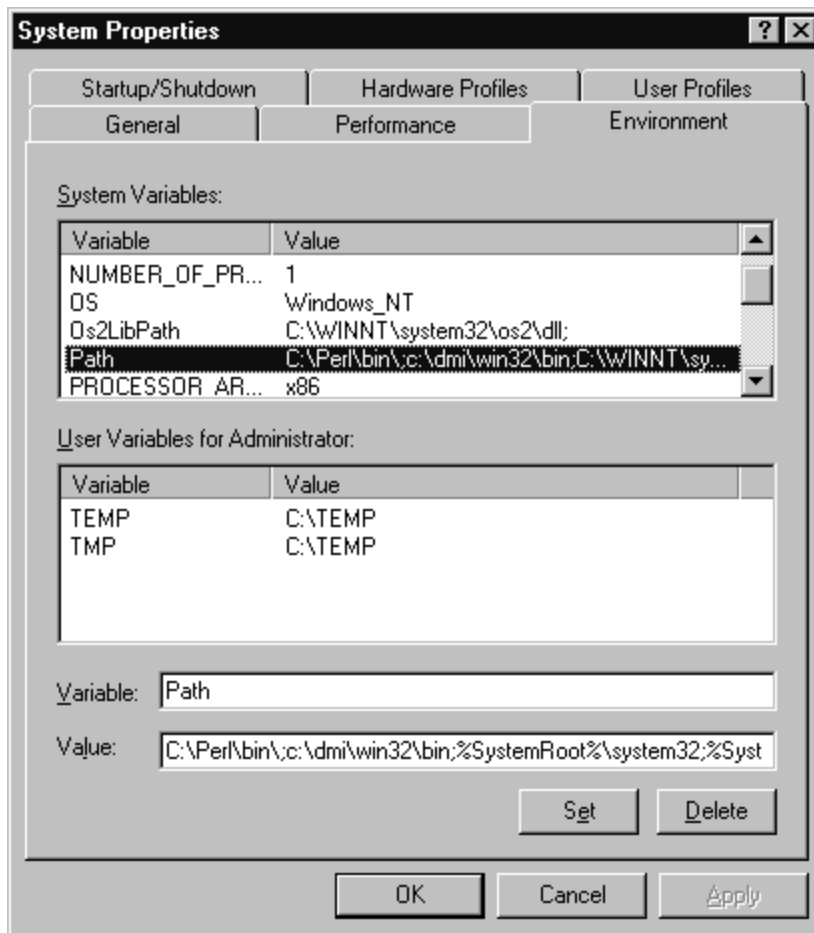
Models ENCM and ENL

1. Start or restart the SMC system.
2. During power up, at the initial screen with the large Compaq logo, press the F10 key for setup. A list of languages, with English selected, displays. Press Enter.
3. The Setup Utility screen displays. Use the right-arrow key to select the Advanced menu. The Power-On Options item is selected. Press Enter.
4. The Power-On Options box displays. Check the setting for the entry After Power Loss. If it is Off, press the down-arrow to move the pointer to this setting. Press the right-arrow key to change the setting to On. Press F10 to accept this change.
5. The Setup Utility screen displays. Use the left-arrow key to select the File menu. Press the down-arrow key to select Save Changes and Exit. Press Enter. The power-up procedure continues.

11.7 Setting the Path Variable

Open the Control Panel and double-click the System icon. In the Environment tab select Path and add the path to the Java Runtime Environment in the Value box.

Figure 11-14 System Properties Dialog Box



PK-2735-00

1. From the Start menu, select Settings | Control Panel. Double-click the System icon. The System Properties dialog box displays.
2. Select the Environment tab (Figure 11–14).
3. In the System Variables block, highlight the Path variable. The name and value of the variable display near the bottom of the dialog box, in the Name and Value boxes, respectively.
4. Move the cursor to the end of the Value box. (Do not delete anything in the box.) Enter the following at the end of the value:

```
;C:\Program Files\JavaSoft\Jre\1.3.0_01\bin\hotspot;
```

Enter this string exactly as shown. Be sure to include the semicolons at the beginning and end, and the space in “Program Files.”
5. Click Set.
6. Click Apply.

NOTE: *If the error message displays when you again try to install or start the CAPM service, restart the SMC system.*

Appendix A

Using the SMC Software CD

Instructions for using the *AlphaServer* GS80/160/320 Console Management Software CD (AG-RMDRB-BE) can be found in the document *AlphaServer* GS80/160/320 System Management Console Installation and Release Notes (AV-RMDQB-TE). The printed version of the installation and release notes is packaged with the CD. A PDF version can be found at the top level of the CD. Both the CD and the printed document are part of the QB-6K4AA-SA kit, which also includes the print version of this manual and the system management console license.

The *AlphaServer* Console Management Software CD installs the following applications on the SMC hard disk:

- ConsoleWorks for *AlphaServer*
- Perl and scripts to customize ConsoleWorks
- *Compaq AlphaServer* Partition Manager
- Service Pack 5 for Microsoft Windows NT
- Internet Explorer
- KEA!
- Acrobat Reader
- DNAS (Access Server Loader and Access Server Manager)
- Carbon Copy 32
- eXcursion
- WorldWire

In addition, shortcuts are placed on the desktop for the following:

- ConsoleWorks for *AlphaServer*
- *Compaq AlphaServer* Partition Manager
- KEA!
- *ConsoleWorks Administration/User Guide* (PDF format)
- *AlphaServer GS80/160/320 System Management Console Installation and User's Guide* (a PDF version of this manual)

Appendix B

Installing a Terminal Server in a GS160/320 System

When a GS160/320 system is reconfigured from a single-console-line to a multiple-console-line system, the system management console must be upgraded. This appendix contains instructions for installing the hardware for that upgrade.

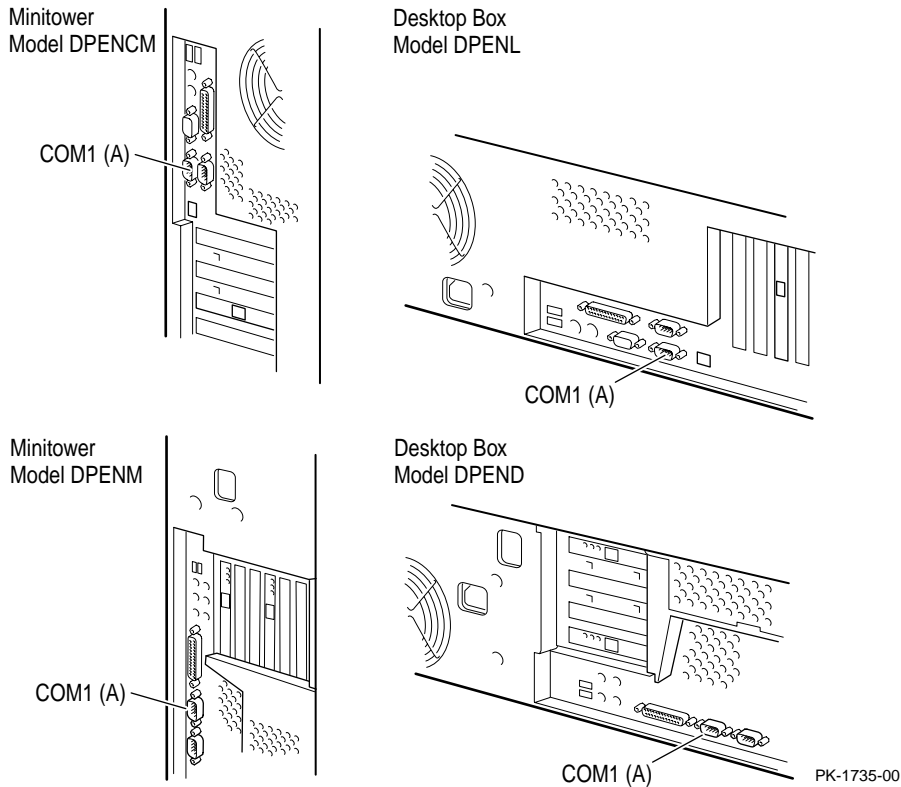
Sections in this chapter include:

- Remove the Existing Connection from the SMC System to the GS160/320
- Attach the Mounting Brackets
- Install the Terminal Server in the GS160/320 Power Cabinet
- Connect the Terminal Server to the Power Source
- Cable the Terminal Server to the SMC System
- Cable the Terminal Server to the GS160/320

B.1 Remove the Existing Connection from the SMC System to the GS160/320

Remove the cable between the SMC system and the GS160/320.

Figure B-1 COM1 Port



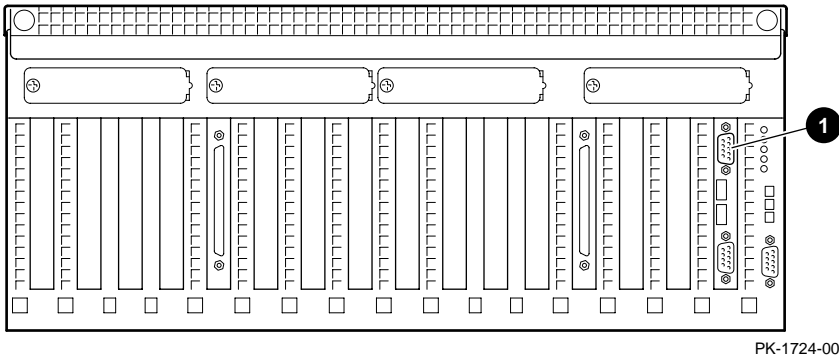
NOTE: *The model type is on a label on the top or side of the SMC box.*

1. Remove the BN24Q cable (17-04308-05) from the H8585-AA connectors (12-36054-01) on the COM1 port of the SMC system (Figure B-1) and the local port of the GS160/320 (❶ in Figure B-2).

NOTE: *The COM1 port might be labeled A.*

2. Remove the H8585-AA connector from the COM1 port.

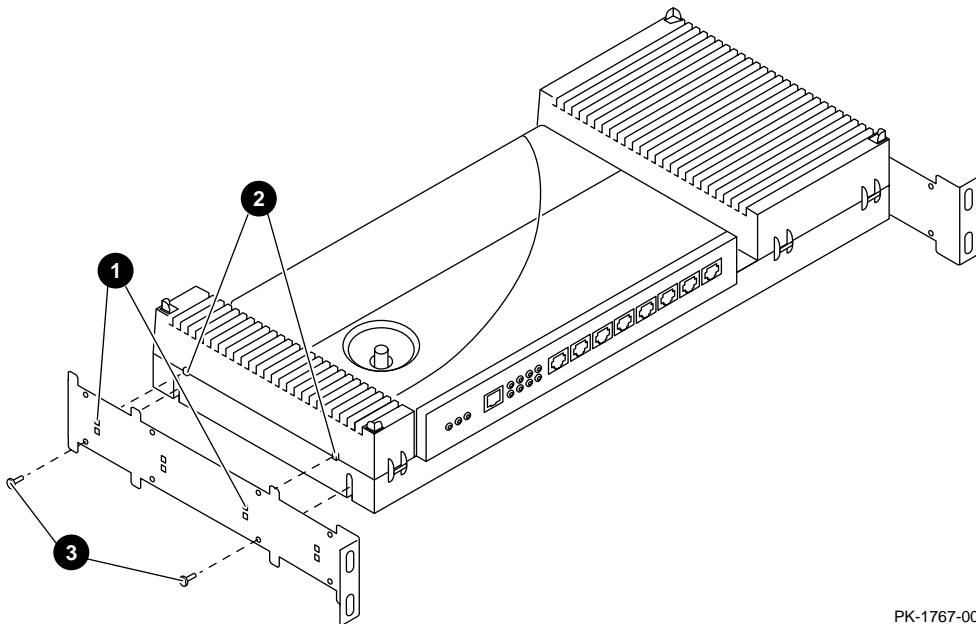
Figure B-2 PCI Box Rear - Local Port Connection



B.2 Attach the Mounting Brackets

Position the top rear holes over the alignment pins. Fasten the brackets with the M5 screws.

Figure B-3 Mounting Brackets



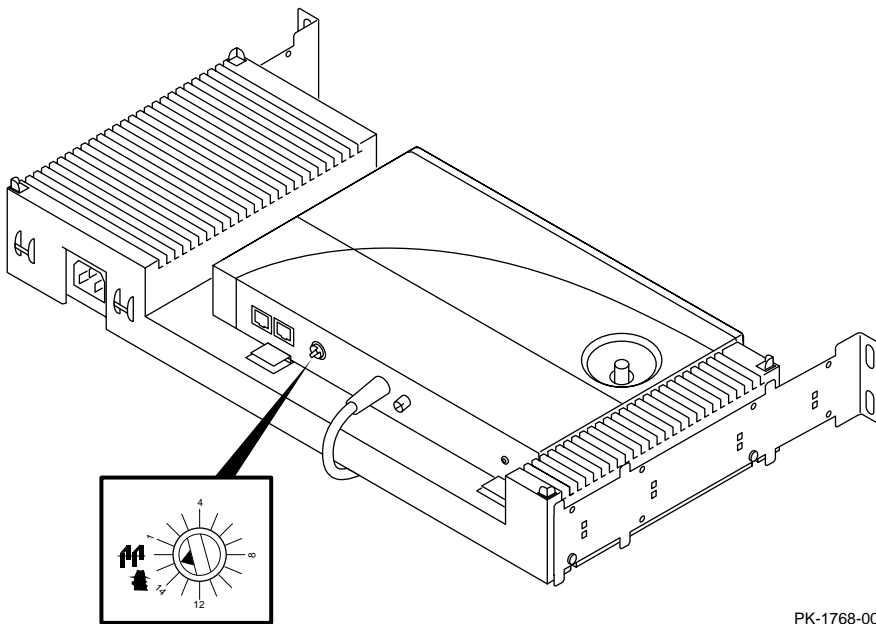
PK-1767-00

1. Position the holes in the bracket (indicated by ❶ in Figure B–3) over the alignment pins (❷) on the terminal server tray. The front end of the bracket should be 2 inches (5 cm) from the front of the terminal server. (The front is the face that has the port connectors.)
2. Fasten the bracket to the terminal server with the M5 screws (❸).
3. Repeat with the bracket on the other side.

B.3 Install the Terminal Server in the GS160/320 Power Cabinet

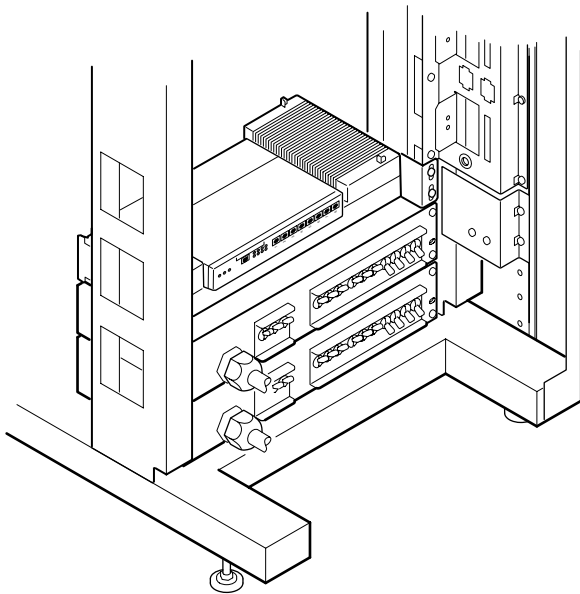
Set the position identifier dial to management agent and install the terminal server in the power cabinet.

Figure B-4 Position Identifier Dial



1. Set the position identifier dial at the rear of the terminal server to management agent (the position after 14; Figure B-4).
2. Attach the power cord to the rear of the terminal server power supply. Do not plug the other end into the power source yet.
3. From the rear of the GS160/320 power cabinet, install the U-type fasteners in holes 14 and 16 from the bottom on both side rails, above the AC input boxes (Figure B-5).
4. Install the terminal server in the power cabinet.

Figure B-5 Terminal Server Placement in the GS160/320 System

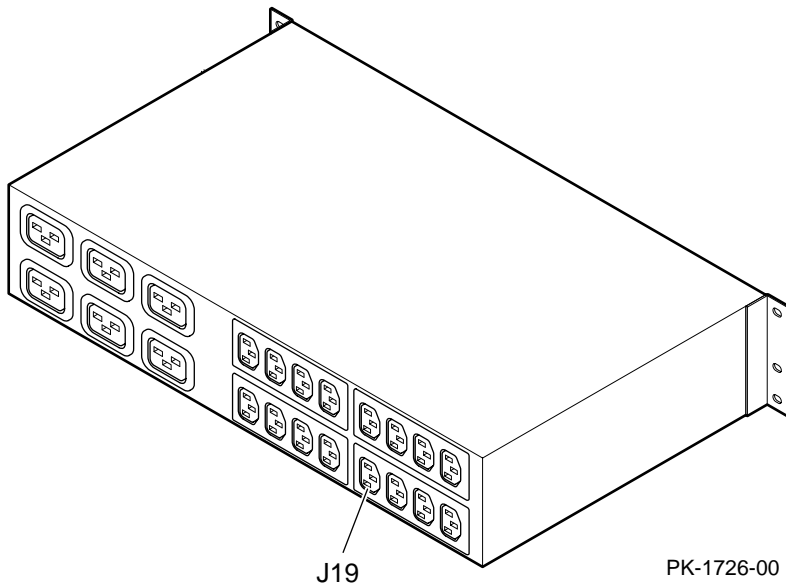


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B.4 Connect the Terminal Server to the Power Source

Connect the power cord to J19 of the bottom AC input box.

Figure B-6 GS160/320 AC Input Box

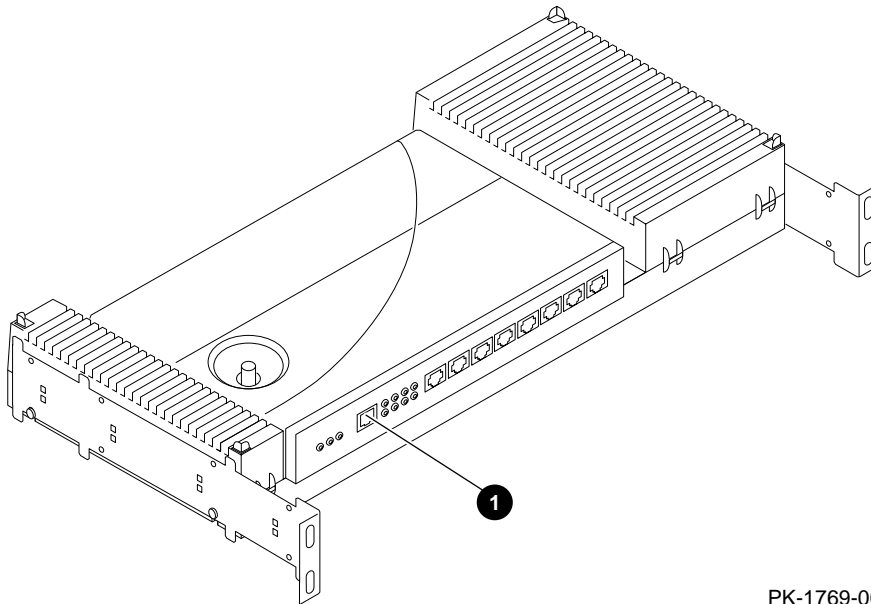


Plug the power cord of the terminal server into J19 of AC input box 1 (the bottom AC input box) in the GS160/320 power cabinet. If the GS160/320 system is powered up, the terminal server powers up when it is plugged in.

B.5 Cable the Terminal Server to the SMC System

Connect the management channel connector on the terminal server to network adapter 2 on the SMC system.

Figure B-7 Terminal Server Management Channel Connector

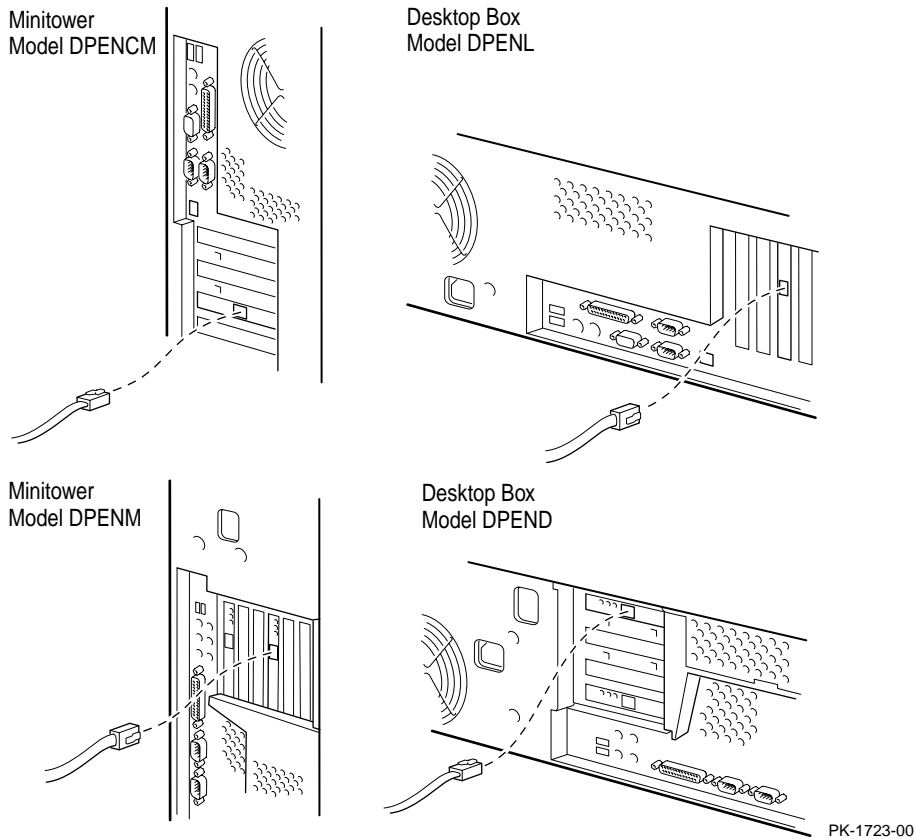


PK-1769-00

1. Connect one end of the BN24Q-07 cable (17-04308-05) to the management channel connector on the terminal server (❶ in Figure B-7).
2. Connect the other end of the cable to network adapter 2 on the SMC system (Figure B-8). The network adapters are numbered from left to right on the minitower; bottom to top on the desktop.

NOTE: *BN24Q is a crossover cable that can be used only for a point-to-point Ethernet connection. It cannot connect an Ethernet node to a hub. If such a connection is required, use a BN25G cable (17-03212-xx).*

Figure B-8 Network Adapter 2



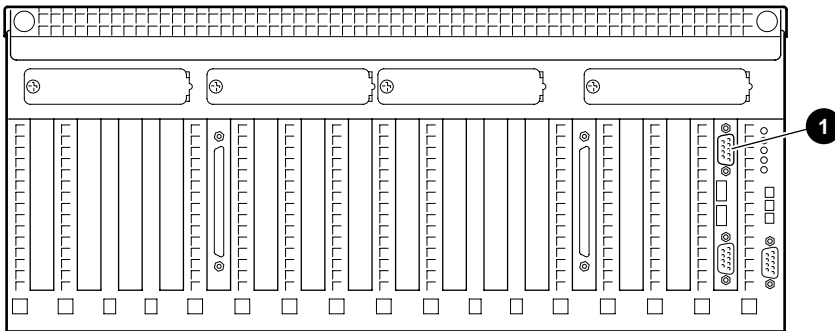
NOTE: *The model type is on a label on the top or side of the SMC box.*

B.6 Cable the Terminal Server to the GS160/320

For each console, connect a terminal server port to the local port of the PCI box.

B.6.1 Make the Cable Connection

Figure B-9 PCI Box Rear –Local Port Location



PK-1724-00

Make the connection for each console:

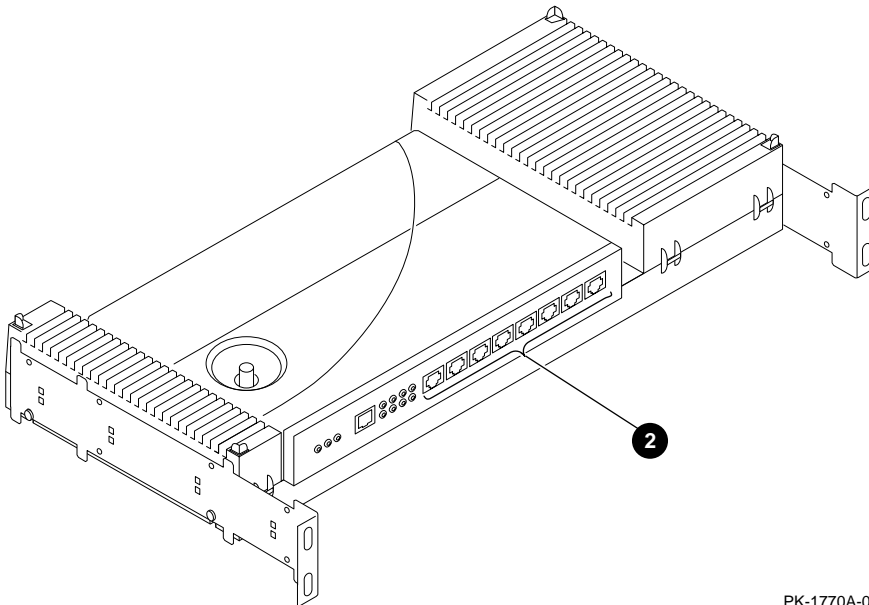
1. Attach an H8585-AA connector (12-36054-01) to the local port of the PCI box (❶ in Figure B-9).
2. Following the cabling chart in Table B-1, label both ends of a BN25G cable (17-03212-05) and connect it from the port on the terminal server (❷ in Figure B-10 shows the location of the ports) to the H8585-AA connector on the PCI box.

A partition can have a failover console if the limitation of eight standard I/O modules in the system is met. The cabling chart in Table B-1 does not distinguish between primary and failover consoles. For information about partitioning the system, see the *AlphaServer GS80/160/320 Firmware Reference Manual*.

Table B-1 Terminal Server Cabling

Terminal Server Port	QBB Number	
	GS160	GS320
1	0	0
2	1	1
3	2	2
4	3	3
5	—	4
6	—	5
7	—	6
8	—	7

Figure B-10 Terminal Server Ports



PK-1770A-00

B.6.2 Record the Connections

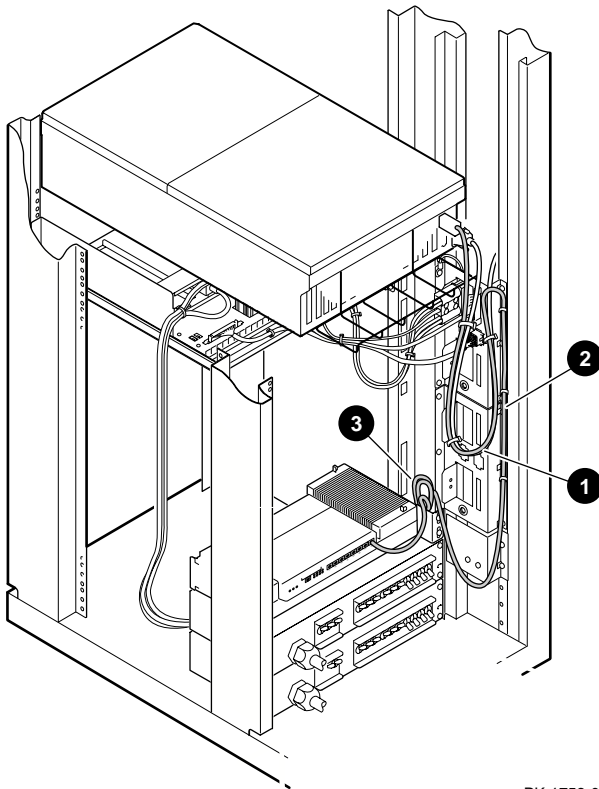
Record the connections made for this installation in Table B-2.

Table B-2 Terminal Server Cabling at This Installation

Terminal Server Port	PCI Box Number	QBB Number
1		
2		
3		
4		
5		
6		
7		
8		

B.6.3 Dress the Cable

Figure B-11 Terminal Server Cable



PK-1753-00

1. At the PCI box end, tie wrap the 17-03212-cable to the CSB junction cable (17-04936-xx) to form a service loop (❶ in Figure B-11).
2. Tie wrap the 17-03212-05 cable down the rail of the cabinet (❷).
3. At the bottom of the rail, coil the cable and place the extra length in the rail (❸).

Appendix C

Installing a Terminal Server in a GS80 System

When a GS80 system is reconfigured from a single-console-line to a multiple-console-line system, the system management console must be upgraded. This appendix contains instructions for installing the hardware for that upgrade.

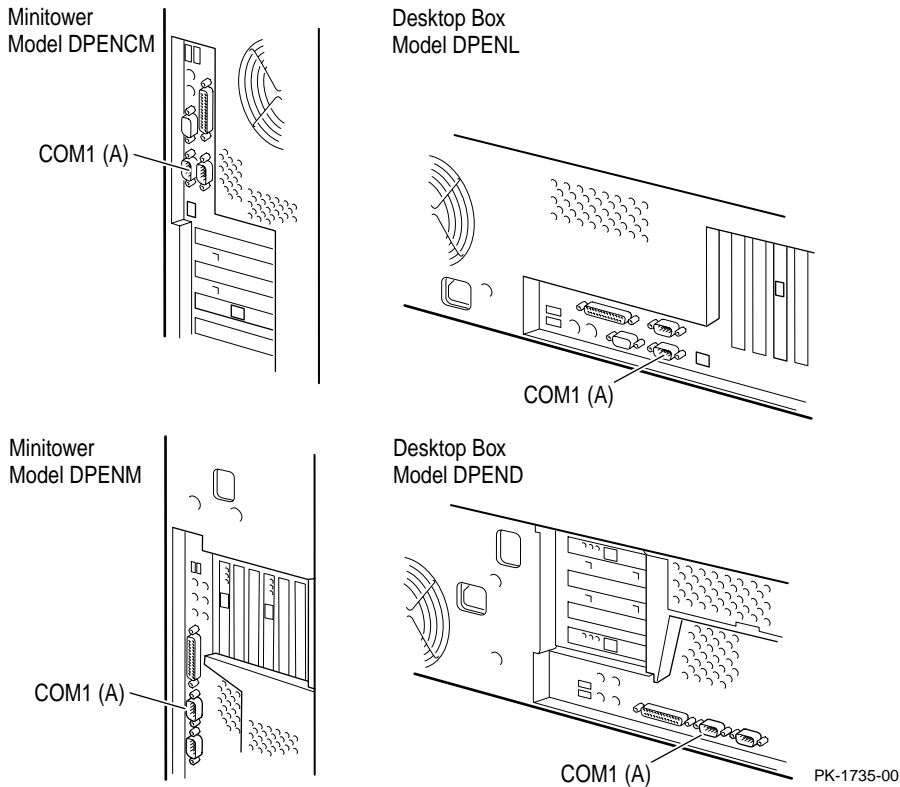
Sections in this chapter include:

- Remove the Existing Connection from the SMC System to the GS80
- Attach the Mounting Brackets
- Install the Terminal Server in the GS80 Rack
- Connect the Terminal Server to the Power Source
- Cable the Terminal Server to the SMC System
- Cable the Terminal Server to the GS80

C.1 Remove the Existing Connection from the SMC System to the GS80

Remove the cable between the SMC system and the GS80.

Figure C-1 COM1 Port



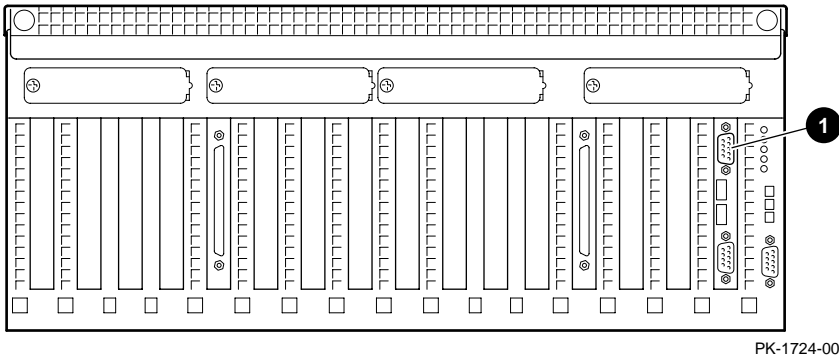
NOTE: *The model type is on a label on the top or side of the SMC box.*

1. Remove the BN24Q cable (17-04308-05) from the H8585-AA connectors (12-36054-01) on the COM1 port of the SMC system (Figure C-1) and the local port of the GS80 (❶ in Figure C-2).

NOTE: *The COM1 port might be labeled A.*

2. Remove the H8585-AA connector from the COM1 port of the SMC.

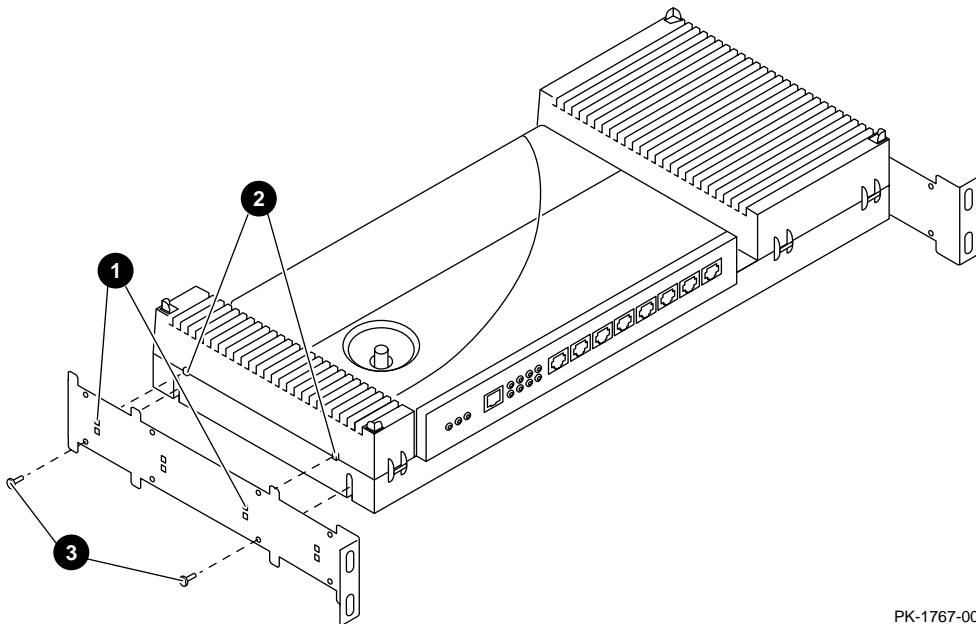
Figure C-2 PCI Box Rear - Local Port Connection



C.2 Attach the Mounting Brackets

Position the top rear holes over the alignment pins. Fasten the brackets with the M5 screws.

Figure C-3 Mounting Brackets



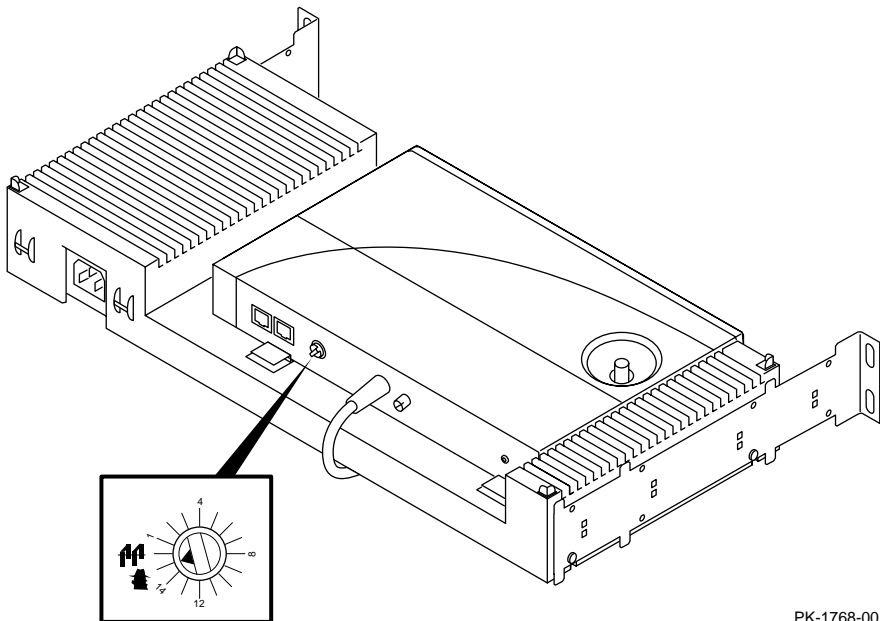
PK-1767-00

1. Position the holes in the bracket (indicated by ❶ in Figure C-3) over the alignment pins (❷) on the terminal server tray. The front end of the bracket should be 2 inches (5 cm) from the front of the terminal server. (The front is the face that has the port connectors.)
2. Fasten the bracket to the terminal server with the M5 screws (❸).
3. Repeat with the bracket on the other side.

C.3 Install the Terminal Server in the GS80 Rack

Set the position identifier dial to management agent and install the terminal server in the power cabinet.

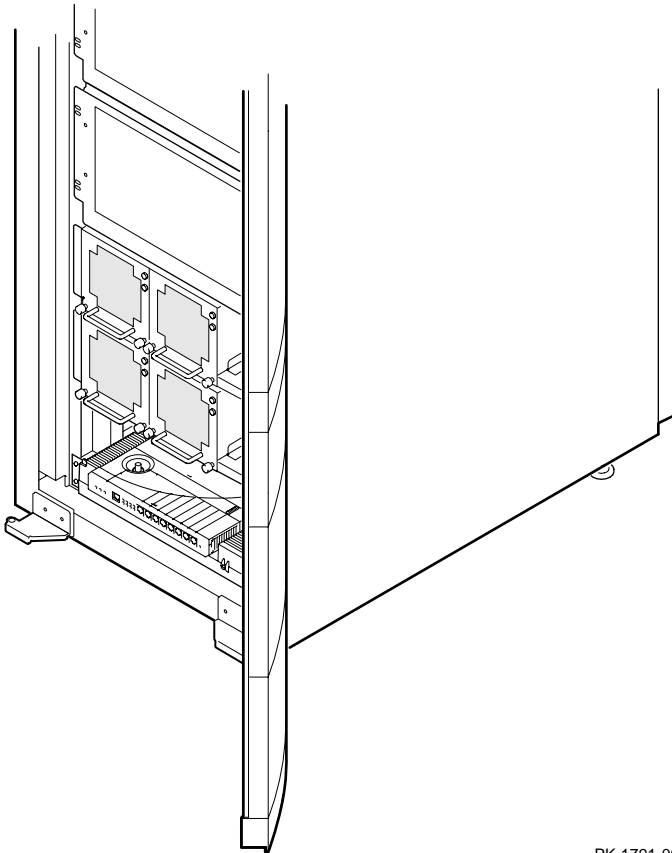
Figure C-4 Position Identifier Dial



PK-1768-00

1. Set the position identifier dial at the rear of the terminal server to management agent (the position after 14; Figure C-4).
2. Attach the power cord to the rear of the terminal server power supply. Do not plug the other end into the power source yet.
3. At the front of the GS80 rack, install the U-type fasteners in holes 1 and 3 at the bottom of both side rails (Figure C-5).
4. Install the terminal server in the rack.

Figure C-5 Terminal Server Placement in the GS80 System



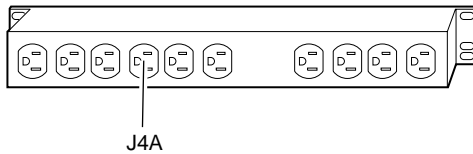
PK-1791-00

C.4 Connect the Terminal Server to the Power Source

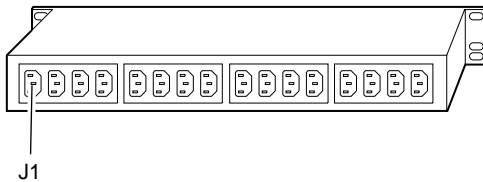
Connect the power cord to J5A or J1 of the bottom AC input box.

Figure C-6 GS80 AC Input Box

North America



Europe and Japan



PK-1784-00

Plug the power cord of the terminal server into AC input box 1 (the bottom AC input box) in the GS80 rack:

- North America systems (–CA variant), use outlet J4A.
- Europe and Japan systems (–CB and –CC variants), use outlet J1.

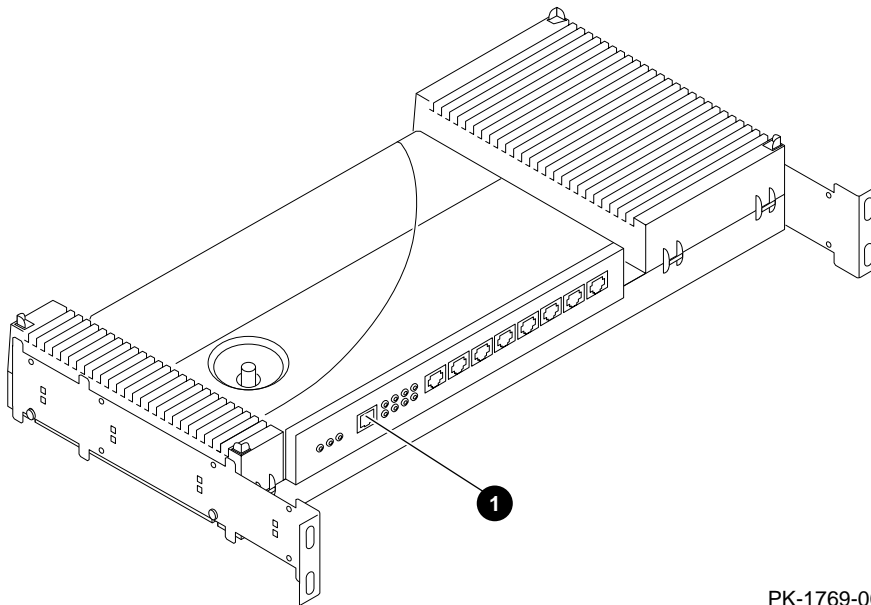
Figure C–6 shows the location of these outlets.

If the GS80 system is powered up, the terminal server powers up when it is plugged in.

C.5 Cable the Terminal Server to the SMC System

Connect the management channel connector on the terminal server to network adapter 2 on the SMC system.

Figure C-7 Terminal Server Management Channel Connector

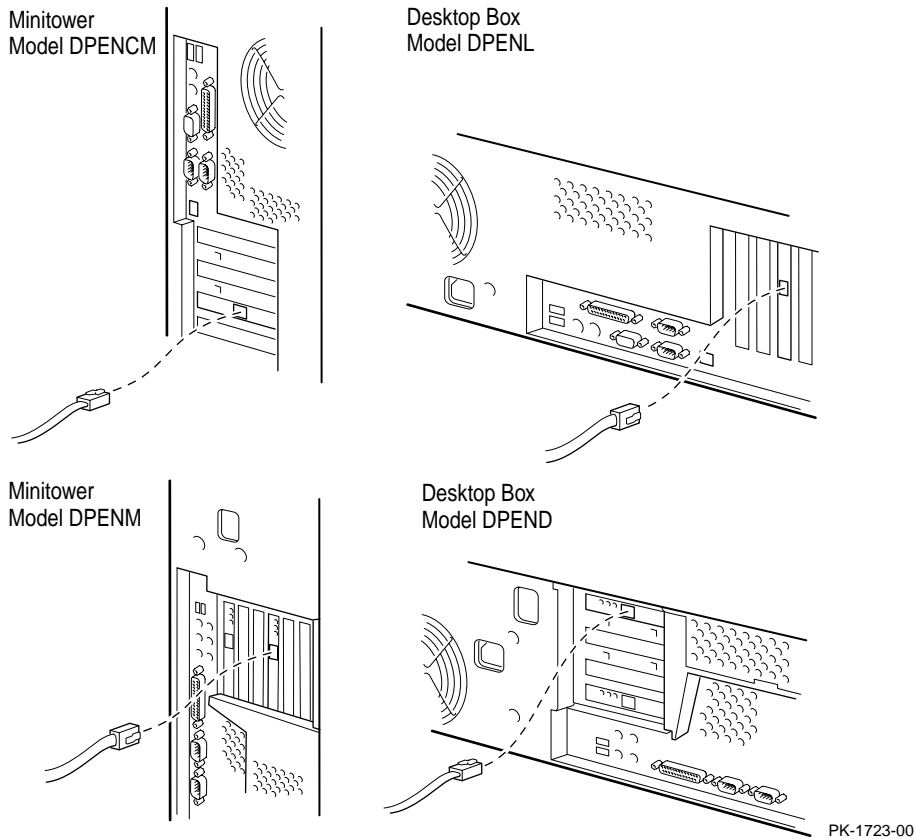


PK-1769-00

1. Connect one end of the BN24Q-07 cable (17-04308-05) to the management channel connector on the terminal server (❶ in Figure C-7).
2. Connect the other end of the cable to network adapter 2 on the SMC system (Figure C-8). The network adapters are numbered from left to right on the minitower; bottom to top on the desktop.

NOTE: *BN24Q is a crossover cable that can be used only for a point-to-point Ethernet connection. It cannot connect an Ethernet node to a hub. If such a connection is required, use a BN25G cable (17-03212-xx).*

Figure C-8 Network Adapter 2



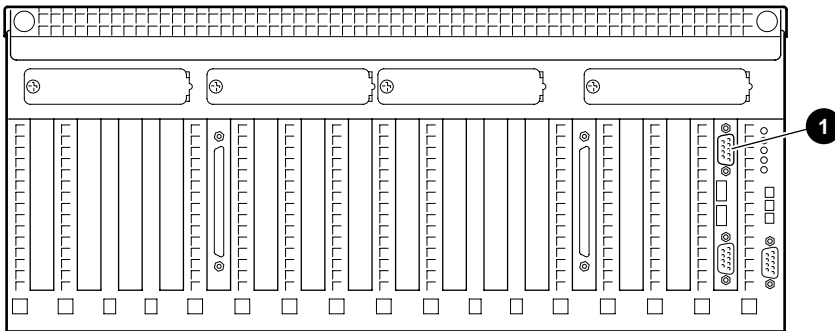
NOTE: *The model type is on a label on the top or side of the SMC box.*

C.6 Cable the Terminal Server to the GS80

For each console, connect a terminal server port to the local port of the PCI box.

C.6.1 Make the Cable Connection

Figure C-9 PCI Box Rear –Local Port Location



PK-1724-00

Make the connection for each console:

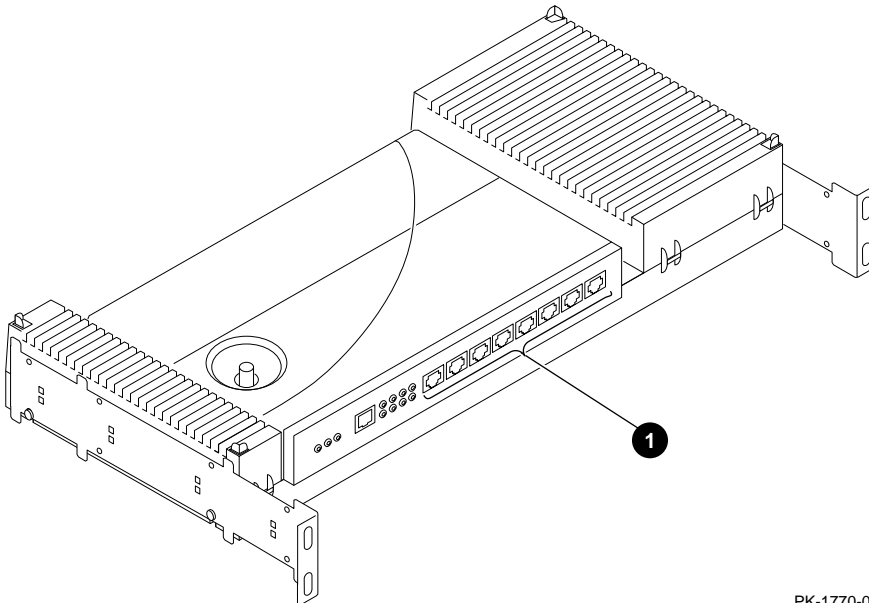
1. Attach an H8585-AA connector (12-36054-01) to the local port of the PCI box (❶ in Figure C-9).
2. Following the cabling chart in Table C-1, label both ends of a BN25G cable (17-03212-05) and connect it from the port on the terminal server (❶ in Figure C-10 shows the location of the ports) to the H8585-AA connector on the PCI box.

A partition can have a failover console. The cabling chart in Table C-1 does not distinguish between primary and failover consoles. For information about partitioning the system, see the *AlphaServer GS80/160/320 Firmware Reference Manual*.

Table C-1 Terminal Server Cabling

Terminal Server Port	QBB Number
1	0
2	1
3	—
4	—
5	—
6	—
7	—
8	—

Figure C-10 Terminal Server Ports



PK-1770-00

C.6.2 Record the Connections

Record the connections made for this installation in Table C-2.

Table C-2 Terminal Server Cabling at This Installation

Terminal Server Port	PCI Box Number	QBB Number
1		
2		
3		
4		
5		
6		
7		
8		

Appendix D

Compaq-Supplied Configuration Files for ConsoleWorks

This appendix describes components that enable ConsoleWorks to operate on the system management console of a GS80/160/320 system.

D.1 SCM.PORT

The file SCM.PORT contains the event and scan definitions in a format compatible with Polycenter Console Manager (PCM.). This file is imported to ConsoleWorks to supply definitions of scans and events.

The name of the scan is GS_SCM_SCAN. All Compaq-supplied events, which are described in Table D-1, are part of this scan. The event pattern triggers are automatically defined during the import. The user may change the help text associated with an event to make it site-specific.

Table D-1 Events Created by SCM.PORT

Event	Description
GS_AIR_MOVER_FAILURE	Air mover failure from a PSM
GS_HS_OVERTEMP	Overtemp failure from an HPM
GS_PCI_PBM_SYSEVENT	PCI/PBM SysEvent
GS_PWR_FAIL	Vital power failure from an HPM
GS_QBB_OVERTEMP_FAILURE	Overtemp failure from a PSM
GS_SYSCLK_FAIL	Clock failure from an HPM
GS_VITAL_POWER_FAILURE	Vital power failure from a PSM

All events listed in Table D-1 have a priority of 50 and a severity of critical.

Note that event GS_PCI_PBM_SYSEVENT can be triggered by any of three subevents. These are defined and recognized in the Perl script, as described in Section D.2.

D.1.1 Loading

SCM.PORT is imported with the `import_pcm` utility. To do this, open a Command Prompt window, change the directory to `C:\Cwks`, and type the command `import_pcm c:\cwks\port\scm.port`.

The PC will need to be restarted after this is done.

D.1.2 Contents

The content of the SCM.PORT file is included in Section D.4. It is supplied for reference purposes; it is useful for verification and testing (Section D.3).

D.2 MAIL.BAT and MAIL.PL

ConsoleWorks invokes the command script MAIL.BAT when an event is triggered. MAIL.BAT, in turn, invokes the Perl interpreter, passing the Perl code filename (MAIL.PL) and the command arguments automatically supplied to it by ConsoleWorks.

Technical Note: ConsoleWorks requires the intermediate step of executing a .BAT file, which then executes the Perl script.

These are the arguments that ConsoleWorks automatically supplies to the MAIL.PL script:

```
$ARGV[0] Console name
$ARGV[1] Event name
$ARGV[2] Event sequence number
$ARGV[3] Name of event context file
$ARGV[4] Contact name (comma delimited if more than one)
$ARGV[5] User supplied parameter
```

The contact name field is based on the information provided during setup. It should be the fully qualified mail addresses of the users who are to be notified during an event action.

A current limitation of ConsoleWorks is the inability to set up a trigger based on patterns that span more than one line. When the event GS_PCI_PBM_SYSEVENT occurs, MAIL.PL parses the resultant context file,

which contains the trigger text and a defined number of displayed lines before and after this text, to determine if this event is one of which a user needs to be notified. These subevents are:

```
~E~ FAN. FAIL - POWEROFF IN 30 SECONDS  
~E~ LM80. TEMP FAIL  
~E~ PS. POK DEASSERTED
```

MAIL.PL then formats a mail addressee, subject and message body from this information, and contacts (through a TCP/IP socket, port 25) an SMTP (Simple Mail Transport Protocol) server and sends this mail message.

It is assumed that a gateway exists at the user site that will forward this mail message to the mail system used at the installation site, similar to the way mail is received from the Internet. This script cannot send mail to non TCP/IP SMTP mail servers, such as Lotus Notes, Mail-11 (VAXmail) or X.400 without such a gateway.

This script does not acknowledge the event to the ConsoleWorks subsystem.

D.2.1 Loading and Configuration

MAIL.BAT and MAIL.PL are copied to the event directory,
C:\Cwks\Actions\Event.

Edit MAIL.PL to change the value of the variable *\$remote* to point to the site's SMTP mail server. Reference the following comment and modify the next line:

```
# This is site specific  
$remote = "post-office.domain.com";
```

D.2.2 Contents

The content of the MAIL.PL file is included in Section D.5.

D.3 Verification and Testing

The following procedures can be used to ensure that the setup was performed properly and that alerts from the GS80/160/320 system do in fact notify the designated persons. Three methods are provided to be used as appropriate.

Method 1 - Complete End-to-End Verification

This method uses the console line echo to drive the events as they would normally be encountered.

Verify that you can connect to the console and receive a prompt. The prompt can be from the SCM, SRM, or operating system. If you do not see a prompt, configure the console as appropriate.

Refer to Section D.4 for the contents of the SCM.PORT file. For any event, look for the string located at the TEXT: label. These patterns can also be seen in the pattern field of the discrete event screen. You can trigger an event by typing the pattern string on the console. Check that the recipients designated during setup receive the appropriate mail message.

Note that you will receive an error message from the console that received the string. This is normal, since the string does not contain a valid command.

Method 2 - Verification That Your Mail System Can Forward Mail to You Correctly

Open a Command window within Windows and type:

C:\cwks\actions\event\mail.pl console event 999 nul: myname@post

(For myname@post use your SMTP address.)

If this does not work, check both your address and the mail sever name (see "\$remote=" in Section D.2.1).

Method 3 - Activation from Within ConsoleWorks

This procedure causes ConsoleWorks to generate actions.

In the left navigation panel of the ConsoleWorks screen select Manage. From the selection links select Events. Scroll down to the item CONWKS-EVENTMOD and click it. When the event details are displayed select the link Automatic Actions. Click the Update Event button at the top of the screen.

This sequence fires off the mail message. It is not necessary to be connected to any consoles.

D.4 Contents of the SCM.PORT File

DELETE_EVENT:

NAME: GS_AIR_MOVER_FAILURE

END:

ADD_EVENT:

NAME: GS_AIR_MOVER_FAILURE

INFO: Air mover failure from a PSM

TEXT: ~E~ QBB%/PSM%% SysEvent:

AIR_MOVER_FAILURE*Reg0:*Reg1:*

CLASS: SCM

SUB_SYSTEM: CSB

REGULAR_EXPRESSION: Y

START: 0

COUNT: 1

PRIORITY: CRITICAL

END:

DELETE_EVENT:

NAME: GS_VITAL_POWER_FAILURE

END:

ADD_EVENT:

NAME: GS_VITAL_POWER_FAILURE

INFO: Vital power failure from a PSM

TEXT: ~E~ QBB%/PSM%% SysEvent:

VITAL_POWER_FAILURE*Reg0:*Reg1:*

CLASS: SCM

SUB_SYSTEM: CSB

REGULAR_EXPRESSION: Y

START: 0

COUNT: 1

PRIORITY: CRITICAL

END:

DELETE_EVENT:

NAME: GS_QBB_OVERTEMP_FAILURE

END:

ADD_EVENT:

NAME: GS_QBB_OVERTEMP_FAILURE

INFO: Overtemp failure from a PSM

TEXT: ~E~ QBB%/PSM%% SysEvent:

QBB_OVERTEMP_FAILURE*Reg0:*Reg1:*

CLASS: SCM

SUB_SYSTEM: CSB

REGULAR_EXPRESSION: Y

START: 0

```

COUNT: 1
PRIORITY: CRITICAL
END:

DELETE_EVENT:
NAME: GS_HS_OVERTEMP
END:

ADD_EVENT:
NAME: GS_HS_OVERTEMP
INFO: Overtemp failure from an HPM
TEXT: ~E~ HSW%/HPM%% SysEvent: HS_OVERTEMP*Reg0:*Reg1:*
CLASS: SCM
SUB_SYSTEM: CSB
REGULAR_EXPRESSION: Y
START: 0
COUNT: 3
PRIORITY: CRITICAL
END:

DELETE_EVENT:
NAME: GS_PWR_FAIL
END:

ADD_EVENT:
NAME: GS_PWR_FAIL
INFO: Vital power failure from an HPM
TEXT: ~E~ HSW%/HPM%% SysEvent: PWR_FAIL*Reg0:*Reg1:*
CLASS: SCM
SUB_SYSTEM: CSB
REGULAR_EXPRESSION: Y
START: 0
COUNT: 3
PRIORITY: CRITICAL
END:

DELETE_EVENT:
NAME: GS_SYCLK_FAIL
END:

ADD_EVENT:
NAME: GS_SYCLK_FAIL
INFO: Clock failure from an HPM
TEXT: ~E~ HSW%/HPM%% SysEvent: SYCLK_FAIL*Reg0:* Reg1:*
CLASS: SCM
SUB_SYSTEM: CSB
REGULAR_EXPRESSION: Y
START: 0
COUNT: 3
PRIORITY: CRITICAL

```

END:

DELETE_EVENT:

NAME: GS_PCI_PBM_SYSEVENT

END:

ADD_EVENT:

NAME: GS_PCI_PBM_SYSEVENT

INFO: PCI/PBM SysEvent

TEXT: ~E~ PCI%/PBM%% SysEvent

CLASS: SCM

SUB_SYSTEM: CSB

REGULAR_EXPRESSION: Y

START: 0

COUNT: 3

PRIORITY: CRITICAL

END:

DELTE SCAN:

NAME: GS_SCM_SCAN

END:

ADD_SCAN:

NAME: GS_SCM_SCAN

INFO: SCM ASCII messages

EVENT: GS_AIR_MOVER_FAILURE

EVENT: GS_VITAL_POWER_FAILURE

EVENT: GS_QBB_OVERTEMP_FAILURE

EVENT: GS_HS_OVERTEMP

EVENT: GS_PWR_FAIL

EVENT: GS_SYSCLK_FAIL

EVENT: GS_PCI_PBM_SYSEVENT

END:

D.5 Contents of the MAIL.PL File

```
#!/usr/local/bin/perl
# Note: This is written in a very simple version of Perl for
non-experts)
#     In perl, a single character match is the period ".",
contrasting with "%"
#     in ConsoleWorks. Multi is "*" in both cases.
#     Also for WinNT, you can not start a perl file directly,
#     though you can in a command window
#     Therefore create a single line script MAIL.BAT like this
#     C:\Perl\Bin\Perl C:\Cwks\Actions\Event\mail.pl %1 %2 %3
%4 %5 %6
#+
# Before this can be used, please change the $remote = line in
the smtpmail subroutine
#

# Mail Action Script
#
# $ARGV[0] Console name
# $ARGV[1] Event Name
# $ARGV[2] Event Sequence Number
# $ARGV[3] Name of event context file
# $ARGV[4] Contact name(s), comma delimited
# $ARGV[5] User Supplied Paramter
#-
use Socket;

sub smtpmail {
    my ($to, $subj, $whoami, $mf, @msg) = @_;
    my ($port, $iaddr, $paddr, $proto, $line);
# This is site specific
    $remote = "my.email.server.name.net";
    $port = 25;
    $iaddr = inet_aton($remote) || die "no host:
\"$remote\"\\n";
    $paddr = sockaddr_in($port, $iaddr);
    $proto = getprotobyname('tcp');
    select(SOCK);
    $| = 1;          # Force flush after every write or print
    socket(SOCK, PF_INET, SOCK_STREAM, $proto) || die "socket:
$!";
    connect(SOCK, $paddr) || die "connect: ". @SOCK . " : $!";
    print SOCK "HELO $whoami\\n";
    sleep(2);
    print SOCK "MAIL FROM: $mf\\n";
    sleep(2);
    print SOCK "RCPT TO: $to\\r\\n";
    sleep(2);
}
```



```

    print SOCK "DATA\n";
#   print SOCK "From: $fm\n";           #Note the error...
    print SOCK "Subject: $subj\n";
    print SOCK "To: $to\n";
    print SOCK "\n";
    print SOCK @msg;
    print SOCK "\n.\n";
    sleep(2);
    print SOCK "QUIT\n";
    sleep(2);
    close (SOCK) || die "close: $!";
}
#
# Main ()
#
my ($whoami, $hostname, $mf, @tolist, $subj, $to, $domail);
$whoami    = "ConsoleWorks";
$hostname  = `hostname`;
$mf        = "$whoami@$hostname";
@tolist    = split /,/, $ARGV[4];
$domail    = 1;

#+
# Parse PCI/BPM SysEvents
# The 3 line entries look something like this, with the last
line changing
#     ~E~ PCI3/PBM13 SysEvent
#     ~E~ PBM13 Error:
#     ~E~ FAN1 FAIL - POWEROFF IN 30 SECONDS
#-
if ( $ARGV[1] eq /GS_PCI_PBM_SYSEVENT/ ) {
    open (SC, $ARGV[3]) ||
        die "Can not open event context file - $ARGV[3] $!";
    while (<SC>) {
        if (/^CONTEXT_BEGIN:/) {last;}
    }
    while (<SC>) {
        if ($_ eq /^CONTEXT_END:/) {last;}
        if ($_ =~ /^~E~/) {
            if ($_ =~ /^~E~ PCI.\./PBM.. SysEvent/) {next;}
            if ($_ =~ /^~E~ PBM.. Error:/) {next;}
#+ # Here is the real parsing, you may take other than mail
actions
# or add other events than listed...
#-      if ($_ =~ /^~E~ FAN. FAIL - POWEROFF IN 30 SECONDS/)
{next;}
            if ($_ =~ /^~E~ LM80 . TEMP FAIL/) {next;}
            if ($_ =~ /^~E~ PS. POK DEASSERTED/) {next;}
#   Other events are just ignored...
        $domail = 0;

```

```

    }
  }
  close(SC);
}
#+
# The other events are just mail...
#-
$subj = "Console $ARGV[0] has Encountered Event $ARGV[1]
(Sequence $ARGV[2])";
open (SC, $ARGV[3]) ||
    die "Can not open event context file - $ARGV[3] $!";
while ($l=<SC>) {
    push @msg, $l;
}
close(SC);

if ($domail) {
    foreach $to (@tolist) {
        smtpmail($to, $subj, $whoami, $mf, @msg);
    }
}
#

```

Appendix E

SMC Hard Disk

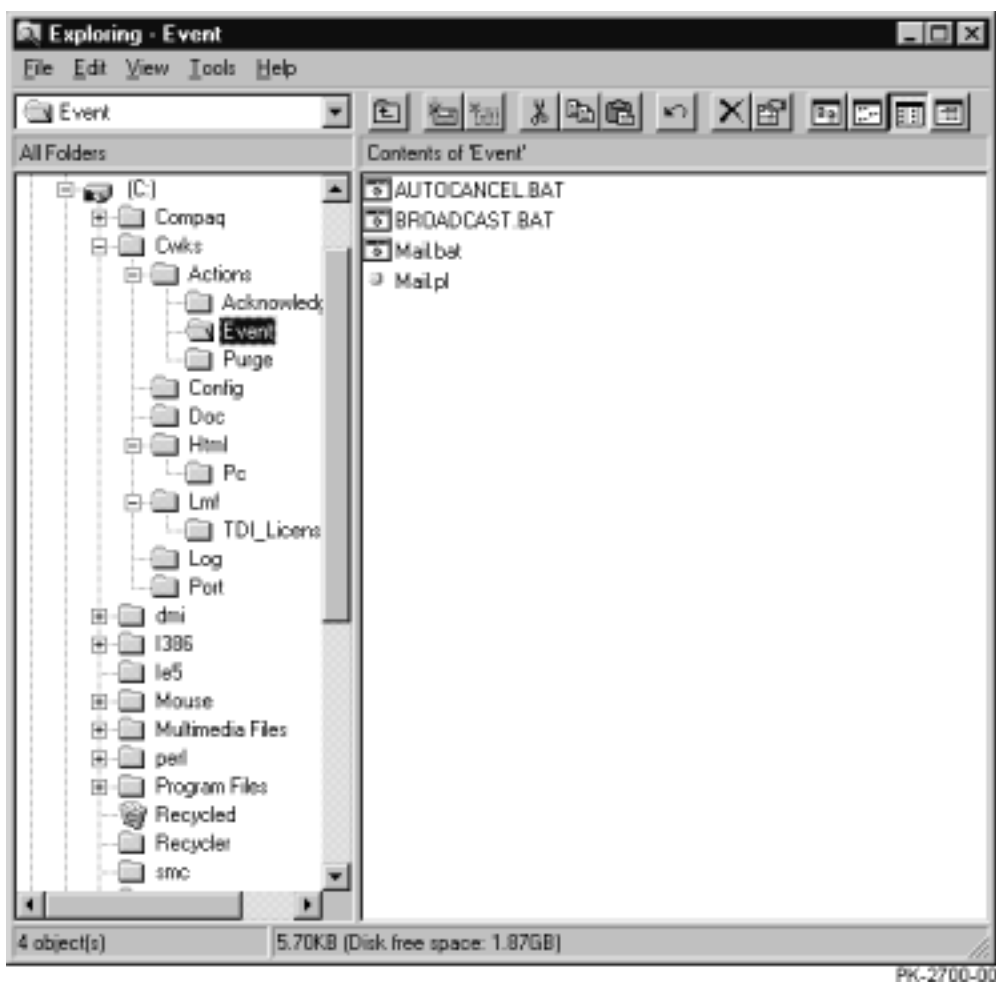
The hard disk in the SMC is partitioned at the factory. It is recommended that the partitions be used as shown in Table E-1.

Table E-1 Use of Disk Partitions

Partition	Recommended Use
C	Operating system and applications
D	User setups (unique scripts, other inputs) and log files

The directory structure of the C partition is shown in Figure E-1.

Figure E-1 C Partition



Index

A

- Access Server Loader, 5-20
 - creating the database, 5-22
 - verifying the connection, 5-24
- Access Server Manager, 5-26
 - Telnet window, 5-29
- Actions (ConsoleWorks)
 - enabling, 8-28
- Administrator account, 3-3, 4-3
- AlphaServer hardware, 2-4

B

- Baud rate, 11-3, 11-8, 11-14
 - COM1, 4-8, 11-14
 - GS80/160/320, 11-13, 11-17
 - terminal server, 11-8
- BN24Q cable, 4-5, B-3, B-10, C-3, C-10
- BN25G cable, 3-6, 3-9, B-10, C-10

C

- Cables
 - BN24Q, 4-5, B-3, B-10, C-3, C-10
 - BN25G, 3-6, 3-9, B-10, C-10
 - RS-232C, 6-2
- Cables, dressing, 3-9, B-15
- CAPM, 9-1–9-37
 - client cannot connect to server, 11-5
 - ConsoleWorks and, 9-3
 - discovery phase, 9-5
 - does not run, 11-5
 - does not start, 11-5
 - files, managing, 9-36
 - hard partitions, 9-8–9-23
 - JVM.DLL cannot be found, 11-5
 - logging in, 9-4
 - overview, 9-4

- partition map, 9-6
- password, 9-5
- running, 7-8
- services, 9-3
- soft partitions, 9-24–9-35
- starting, 9-2
- unexpected error, 11-6
- username, 9-5
- Windows NT service, 11-5
- Windows NT services required for
 - running, 9-3
- Carbon Copy Access Edition,
 - configuring, 6-4
- Changing computer name, 5-4
- Circuit breakers, location, 3-3, 4-3
- COM1 port, SMC system, 4-4, 11-14, B-2, C-2
- COM2 port, SMC system, 6-2
- Compaq AlphaServer Partition Manager. *See* CAPM
- Computer name, changing, 5-4
- Configuration
 - ConsoleWorks
 - restoring, 8-59
 - saving, 8-59
 - SMC software for multiple consoles, 5-1–5-33
 - SMC software for single console, 5-1–5-17, 5-33
- Connecting SMC
 - multiple-console system, 3-1–3-11
 - single-console system, 4-1–4-9
- Console management software CD, A-1
- Consoles (ConsoleWorks)
 - adding, 8-16
 - configuring, 8-16
 - deleting, 8-14
 - managing, 8-8–8-21

- renaming, 8-20
- viewing activity, 8-9
- viewing configuration, 8-9
- ConsoleWorks, 1-3, 8-1–8-62, D-1–D-10
 - access time, 11-4
 - actions
 - enabling, 8-28
 - certificate authority, 8-10–8-13
 - configuration
 - restoring, 8-59
 - saving, 8-59
 - configuring for single console, 5-32
 - console
 - adding, 8-16
 - configuring, 8-16
 - deleting, 8-14
 - renaming, 8-20
 - viewing activity, 8-9
 - viewing configuration, 8-9
 - displaying terminal emulator window, 11-13
 - does not start, 11-4
 - events, D-1
 - acknowledging, 8-34
 - adding, 8-24
 - AlphaServer specific, 8-26
 - Compaq-supplied, 8-26
 - defined, 8-24
 - deleting, 8-34
 - expunging, 8-36
 - managing, 8-22–8-37
 - modifying, 8-24
 - files, managing, 8-50–8-57
 - left navigation panel, 8-6
 - log file
 - deleting, 8-54
 - mailing, 8-56
 - viewing, 8-52
 - logging on, 8-3
 - lower navigation panel, 8-6
 - mail server name, defining, 5-14
 - mail triggered by an event, 8-5
 - main data panel, 8-6
 - managing consoles, 8-8–8-21
 - message
 - reading, 8-43

- sending, 8-42
- overview, 8-4
- password, 8-3
- profile
 - adding, 8-46
 - modifying, 8-48
- scan
 - adding, 8-32
 - defined, 8-32
 - modifying, 8-32
- screen, 8-6
- script, 5-14, D-2
- security warning, 8-11, 11-5
- setup, testing, D-3
- start time, 8-23, 11-4
- starting, 8-2
- terminal emulator window, 11-3
- testing setup, D-3
- user
 - adding, 8-40
 - communicating with another, 8-42
- user password, changing, 8-44
- username, 8-3
- users, managing, 8-38–8-49
- using KEA! with, 8-60
- Windows NT services, 11-4, 11-5, 11-20
- ConsoleWorks Administration/User Guide, 8-1
- Corporate network, 5-8
 - cabling to, 3-10
 - configuring, 5-4

D

- Date, setting on SMC system, 5-2
- Desktop icons, 7-5

E

- Events (ConsoleWorks)
 - acknowledging, 8-34
 - adding, 8-24
 - AlphaServer specific, 8-26
 - Compaq-supplied, 8-26
 - defined, 8-24

- deleting, 8-34
- expunging, 8-36
- managing, 8-22–8-37
- modifying, 8-24

eXcursion, 10-2

F

Files (CAPM), managing, 9-36

Files (ConsoleWorks), managing, 8-50–8-57

G

Graphical Configuration Utility (GCU), 10-1–10-9

GS80/160/320

- hardware, 2-4
- keyswitch, 3-2, 4-2
- local port, 3-6, 4-5

H

H8585–AA connector, 3-6, 4-5, B-3, B-12, C-3, C-12

Hard partition

- adding, 9-14
- committing partition map, 9-20
- creating, 9-10
- defined, 9-9
- deleting, 9-16
- loading partition map, 9-22
- modifying partition map, 9-18
- saving partition map, 9-20
- validating partition map, 9-20

Hardware address label, terminal server, 5-23

I

Icons, 7-5

Installation

- kit contents, 2-2
- order of steps, 2-4
- SMC system, 3-2, 4-2
- terminal server, B-1–B-15, C-1–C-14

Internet Explorer

- changing proxy setting, 11-18

IP address, 5-10, 7-8

IP host, 11-3

K

KEA!, using with ConsoleWorks, 8-60

Keyswitch, 2-4, 3-3, 4-3

Kits

- SMC, 2-2
- terminal server, 2-3

L

Local port, PCI box, 3-6, 4-5, B-12, C-3, C-12

Log file (ConsoleWorks)

- deleting, 8-54
- mailing, 5-16, 8-56
- viewing, 8-52

Logging on to ConsoleWorks, 8-3

M

Mail server, defining in ConsoleWorks, 5-14

MAIL.BAT file, D-2

MAIL.PL file, D-2, D-8

Mailing log files, 5-16

Management channel connector, 3-4

Managing consoles, 8-8–8-21

Modem setup, 6-2

Monitor, 2-3

Multiple-console system, connecting SMC in, 3-1

N

Network adapter 1, 3-10, 4-6

Network adapter 2, 3-5, B-10

Network protocol

- binding, 5-12
- selecting, 5-7

Network setup, verifying, 5-13

O

OpenVMS Alpha Galaxy Guide, 10-9

OpenVMS Galaxy, 10-1

Outlook Express, 5-16

Overview, 1-2

 ConsoleWorks, 8-4

P

Partition

 hard

 adding, 9-14

 committing partition map, 9-20

 creating, 9-10

 defined, 9-9

 deleting, 9-16

 loading partition map, 9-22

 modifying partition map, 9-18

 saving partition map, 9-20

 validating partition map, 9-20

 soft

 adding, 9-28

 advanced, 9-34

 basic, 9-26

 defined, 9-25

 deleting, 9-32

 modifying, 9-30

Partition map, 9-6

 committing, 9-20

 loading, 9-22

 modifying, 9-18

 saving, 9-20

 validating, 9-20

Partitions, SMC hard disk, E-1

Password

 CAPM, 9-5

 ConsoleWorks

 changing user password, 8-44

 default for first login, 8-3

Path variable, 11-24

PCI box local port, 3-6, 4-5, B-12, C-3,

 C-12

Ports

 COM1, 4-4, 4-8, 11-14, B-2, C-2

 COM2, 6-2

 local (GS80/160/320), 3-6, 4-5, B-12,

 C-3, C-12

 terminal server, 3-7, 11-9, B-13, C-13

Position identifier dial, terminal server,
 11-2

Powering up the system, 2-4, 3-3, 4-3

Private LAN, configuring, 5-4

Profile (ConsoleWorks)

 adding, 8-46

 defined, 8-46

 modifying, 8-48

Proxy, Internet Explorer, 11-18

R

Restoring the SMC disk, A-1

Restrictions, 7-8

RS-232C cable, 6-2

S

Scan (ConsoleWorks)

 adding, 8-32

 defined, 8-32

 modifying, 8-32

SCM escape sequence, 7-8

SCM password, 7-8

SCM.PORT file, D-1, D-5

Script, ConsoleWorks, 5-14, D-2

Selecting network protocol, 5-7

Setting SMC system time, date, and
 time zone, 5-2

Single-console system, connecting SMC
 in, 4-1

SMC system

 cabling to corporate network, 3-10, 4-
 6

 cabling to private network, 3-4, B-10

 cabling to terminal server, 3-4, B-10

 COM1 port, 4-4, 4-8, 11-14, B-2, C-2

 COM2 port, 6-2

 configuring for remote use, 6-1–6-6

 desktop icons, 7-5

 hard disk partitions, E-1

 installing, 3-2, 4-2

 logging on to, 7-2

 long boot time, 11-2

 network adapter 1, 3-10, 4-6

 network adapter 2, 3-5, B-10

- not communicating with terminal server, 11-2
- restart after power fail, 11-7
- restart after power failure, 11-22
- restoring disk, A-1
- restrictions, 7-8
- running applications remotely, 7-6
- setting up the box and monitor, 3-2, 4-2
- setting up the modem, 6-2
- software, 3-3, 4-3
- SMC Web page, 7-6, 7-8, 8-2, 9-2
 - cannot display user guides, 11-7
 - displaying, 7-7
 - does not display, 11-6
 - running CAPM from, 9-3
 - running ConsoleWorks from, 8-3, 9-3
 - Windows NT service, 11-6
- Soft partition
 - adding, 9-28
 - advanced, 9-34
 - basic, 9-26
 - defined, 9-25
 - deleting, 9-32
 - modifying, 9-30
- Software
 - configuring for multiple consoles, 5-1-5-33
 - configuring for single console, 5-1-5-17, 5-33, 5-32
- SRM password, 7-8
- Starting ConsoleWorks, 8-2
- Steps in installation, 2-4
- System management console overview, 1-2

T

- TCP/IP protocol, 5-7
- TDI certificate, 8-12
- Terminal server
 - cabling, 3-7, B-13, C-13
 - cabling to GS160/320, B-12
 - cabling to GS80, C-12
 - cabling to SMC system, 3-4, B-10, C-10
 - connecting to power source, B-8, C-8
 - hardware address label, 5-23
 - installation in GS160/320, B-1-B-15
 - installation in GS80, C-1-C-14
 - IP host setting, 11-3
 - location in GS160/320, B-6
 - location in GS80, C-6
 - mounting brackets, B-4, C-4
 - not communicating with SMC system, 11-2
 - ports, 3-7, 11-9, B-13, C-13
 - position identifier dial, 11-2, B-6, C-6
- Testing ConsoleWorks setup, D-3
- Time zone, setting on SMC system, 5-2
- Time, setting on SMC system, 5-2
- Troubleshooting, 5-25, 11-1-11-25

U

- UNIX, text unreadable when booting, 11-3
- User (ConsoleWorks)
 - adding, 8-40
 - communicating with another, 8-42
- Users (ConsoleWorks)
 - managing, 8-38-8-49

